Little Giant.

SCREW CUTTING TOOLS AND MACHINERY

WELLS BROS. COMPANY

GREENFIELD, MASS.,

UNITED STATES OF AMERICA

Sylvester
Sundbacka

C. A. HACK & SON, TAUNTON, MASS.

Little Giant.

TRADE MARK

(REGISTERED)

SEE THAT

"LITTLE GIANT"

IS ON ALL YOUR SCREW CUTTING

TOOLS.

WELLS BROS. COMPANY.

GREENFIELD, MASS., U. S. A.

MANUFACTURERS OF

TAPS, DIES, SCREW PLATES, BOLT CUTTERS and NUT TAPPERS, REAMERS, GAUGES, SPECIAL TOOLS, ETC.

F. O. WELLS, President.

F. E. SNOW, Treasurer.

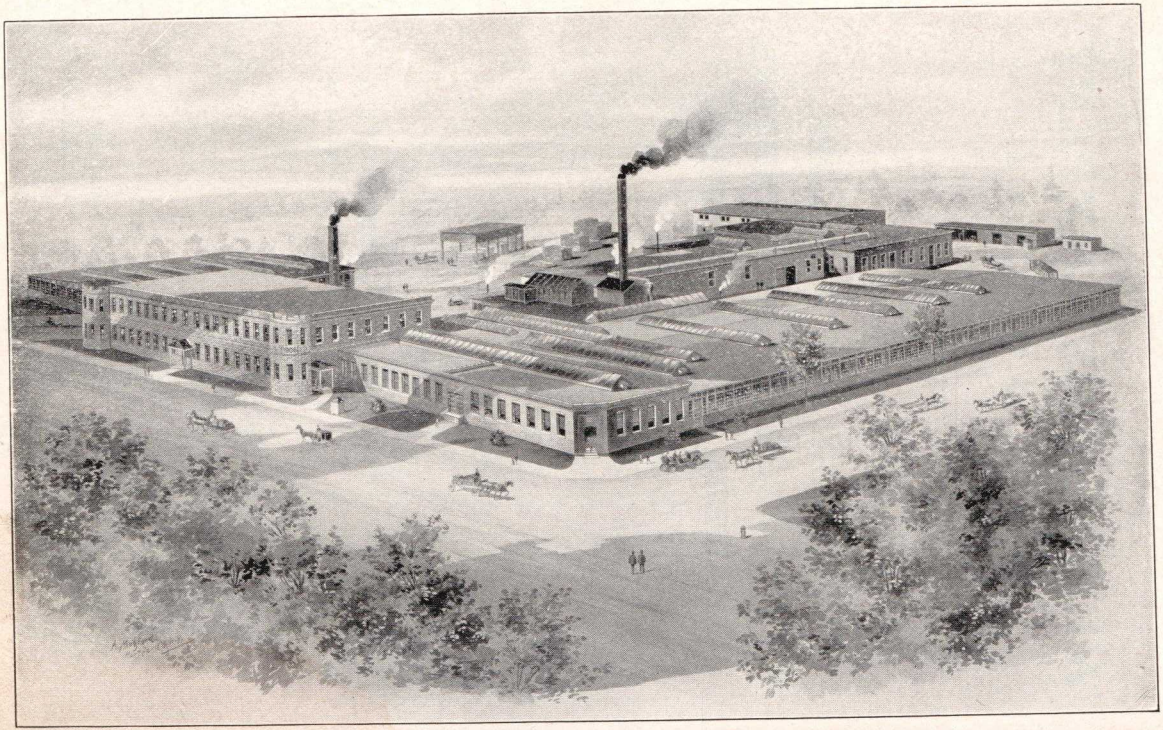
NEW YORK OFFICE
56 Reade St.

LONDON OFFICE
149 Queen Victoria St.

CATALOG
NO. 22.

CABLE ADDRESS:

LIEBERS,..... "WELLS"
ATLANTIC..... "WELLSNOW"



General Offices and Factory, Greenfield, Mass., U. S. A.

Little Giant.

FOREWORD.

THIS CATALOG CANCELS ALL PREVIOUS EDITIONS.

WE have endeavored in the compiling of this book to eliminate such matter as is not needed to properly describe the articles listed.

At the same time we have endeavored to list in a clear manner all such goods as are regularly made by us.

In addition to the regular tools listed in our catalog we make a large variety of special tools.

All our tools are stamped both with our name "Wells Bros. Co.," and our trade mark "Little Giant" which is a guarantee on every tool.

We carry a large stock of goods in both our New York and London stores.

WELLS BROS. COMPANY,

GREENFIELD, MASS., U. S. A.

INSTRUCTIONS AND SUGGESTIONS

To insure a correct understanding always specify tools by name and give size.

Clearly designate whether goods are to be sent by freight, express or mail. (Goods sent by mail at buyers' risk.) Where instructions are not given we will use our best judgment.

When ordering special tools give full dimensions of all parts. Send drawings or if possible a sample. Also name kind of material on which they are to be used.

SPECIAL TAPS.

Give style of tap wanted, diameter, length over all, length of threaded part, number of threads per inch. Also state whether "V", U. S. S., Whitworth or other form of thread is desired. If shank is special give complete specifications. If hand Taps, advise whether Taper, Plug or Bottoming.

SPECIAL DIES.

Give style, diameter, thickness, number of threads per inch and whether "V", U. S. S., Whitworth or other form of threads are wanted.

INSTRUCTIONS AND SUGGESTIONS

SPECIAL REAMERS.

Give style of reamer, diameter at point, diameter at largest cutting size, length over all. Length of flute.

In ordering any special tool it is desirable to have all information possible. Too much information will do no harm. Too little information may cause errors, delays, etc.

All tools bearing our name and trade mark are made of the very best material obtainable and by mechanics who are specialists in their line, on machines of the most modern construction. A great many of the machines were designed and built for our especial use after years of study.

Every article is carefully inspected after each operation.

Delicate measuring tools are used extensively. We call particular attention to the manner in which we measure our taps. We list in this catalog our line of gauges and micrometers, We measure all our taps on the angle of the thread which insures accuracy, as the angle of the thread does not vary as the top or bottom does. We also measure them on the thread so that we have a double check.

All tools are tempered to cover the widest possible range of service. They are guaranteed against fire cracks and other defects.

SECTION I.

PAGES 9 TO 58.

SCREW PLATES FOR BOLT.

SINGLE STOCKED.

SINGLE STOCKED WITH SETS OF TAPS.

FULL STOCKED.

SINGLE STOCKED WITH TWIST DRILLS.

SIZES LARGER THAN 1½ INCHES OPENING DIE.

PUMP MAKERS.

Little Giant.

SCREW PLATES.

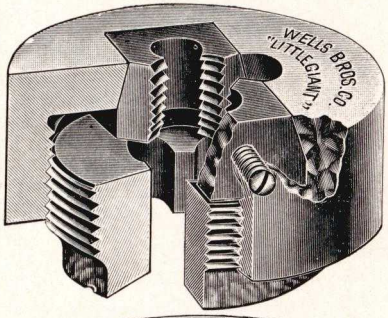


FIG. I.
SECTIONAL VIEW OF
DIE AND COLLET.

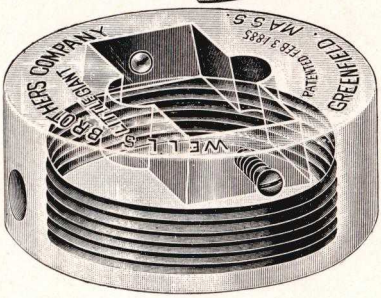


FIG. II.
CAP.

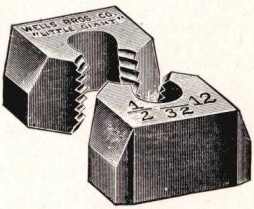


FIG. III.
"LITTLE GIANT"
ADJUSTABLE DIE.

FIG. IV.
GUIDE.

For Description see opposite page.

SCREW PLATES.

THE DESCRIPTION GIVEN BELOW IS ILLUSTRATED BY CUTS SHOWN ON OPPOSITE PAGE.

THE collet or holder is made of two pieces, called a cap (Fig. II) and guide (Fig. IV.)

The die itself (Fig. III) is of two pieces. These two parts are really halves of a die. The dies are beveled on both sides alike. The cap (Fig. I) has a bevel slot into which the bevel of the die (Fig. 3) is fitted. The guide (Fig. 4) is screwed into the cap (Fig. 2) which throws the die (Fig. 3) into the bevel of the collet and into line.

The die being beveled on both sides makes the die fit in the collet as solidly as if it were a solid die. The bevel on both sides of the die and the fact that both of these bevels rest against the solid bevels of the solid cap makes it impossible for the die to twist in the collet. The thickness of the cap is enough to insure its not giving any to the strain of the die when in use.

TO ADJUST.

Dies are adjustable to overcome variations in sizes, also wear, etc. To adjust, simply turn the screws at ends of dies in or out as the adjustment desired requires.

Our claim for this adjustable die is its solidity the impossibility of stripping of threads; its perfect adjustment, its simplicity, durability, and strength.

The words "LITTLE GIANT" when used in connection with screw cutting tools means SUPERIORITY OF WORKMANSHIP. Nothing but the very best of material enters into the construction of the tools and machines illustrated in this catalogue.

These Taps and Dies make perfect threads at one cut.

Little Giant

SCREW PLATES.

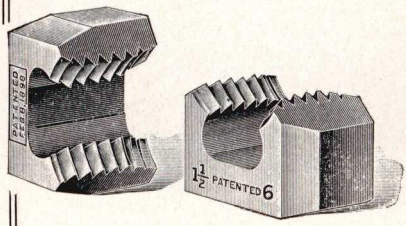


Fig. I.
PLATE DIE

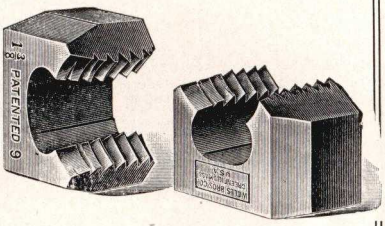


Fig. II.
MACHINE DIE

"LITTLE GIANT" DIES

FOR PLATE AND MACHINE.

WE wish to call your particular attention to the above cut.

Fig. No. 1—Shows our patented "Little Giant" adjustable die as used in our Screw Plates.

Fig. No. 2—Shows our patented "Little Giant" adjustable die as used in our Bolt Cutters.

Both dies are of the same general style, but there is one particular point in which they differ, i.e.,

The relief or throat on the Plate Die (Fig. 1) is on the back, showing that work enters from that side.

The relief or throat on the Machine Die (Fig. 2) is on the face side, showing that work enters from face side.

For other description of "Little Giant" Dies see page 11.

When ordering dies be careful to state plainly what style of die is wanted.

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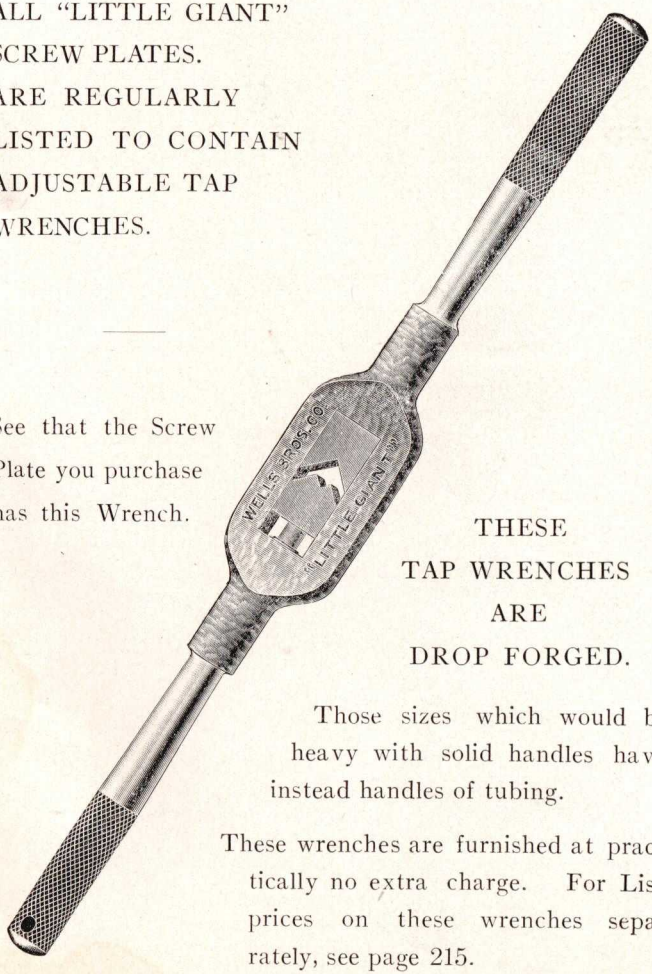
SCREW PLATES.

TAP WRENCHES.

ALL "LITTLE GIANT" SCREW PLATES. ARE REGULARLY LISTED TO CONTAIN ADJUSTABLE TAP WRENCHES.

See that the Screw Plate you purchase has this Wrench.



THESE TAP WRENCHES ARE DROP FORGED.

Those sizes which would be heavy with solid handles have instead handles of tubing.

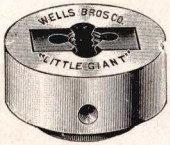
These wrenches are furnished at practically no extra charge. For List prices on these wrenches separately, see page 215.

DIES AND COLLETS.

COLLET 1¼″ diam.

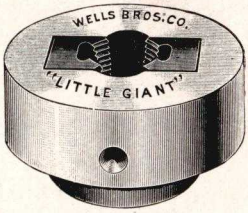
COLLET 1⅝″ diam.

COLLET 2″ diam.

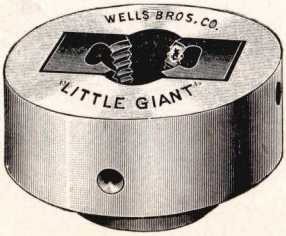


COLLET 2¾″ diam.

COLLET 2¾″ diam.



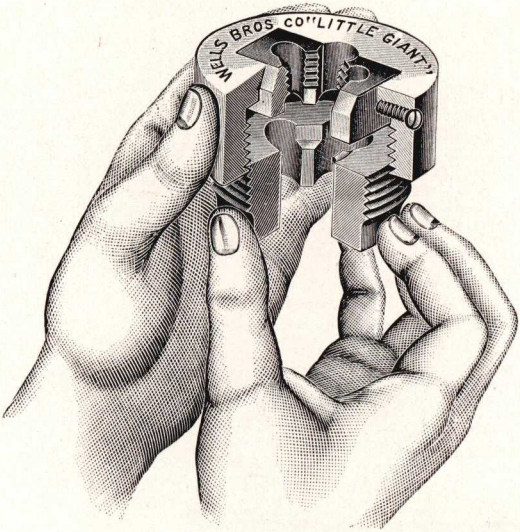
COLLET 4″ diam.



COLLET 4½″ diam.

Little Giant.

SCREW PLATES.



THE above cut will give a very good idea of the manner in which our Little Giant Die is put in the collet.

The guide is screwed into the cap forcing the bevels of the die into the bevels of the collet bringing it into place and making the cutting parts absolutely solid.

The collets shown on opposite page are described as follows:

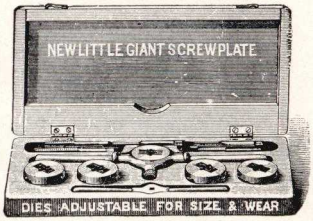
Collets	1¼	inch	diameter	hold	dies	—	to	¼	inch
"	1⅝	"	"	"	"	—	"	⅜	"
"	2	"	"	"	"	3/16	"	½	"
"	2¾	"	"	"	"	¼	"	1	"
"	4	"	"	"	"	⅝	"	1¼	"
"	4½	"	"	"	"	1⅛	"	1½	"

Do not understand that any collet 2¾ inch diameter will hold any die to 1 inch.

Dies as large as 1 inch are held in collets 2¾ inch diameter. A separate collet is needed for each size die. The ⅞ and 1 inch dies have round backs as shown in the fifth cut.

Little Giant.

SCREW PLATES.



Assortment No. A1.

Stock 7½ long. Adjustable Tap Wrench No. 0.
Plug Taps, Dies, Collets 1¼ diameter.

Cutting $\frac{1}{8}$ 40, $\frac{5}{32}$ 32, $\frac{3}{16}$ 24, $\frac{7}{32}$ 24, $\frac{1}{4}$ 20 ..... **$6.50**

Assortment No. A2.

Stock 7½ long. Adjustable Tap Wrench No. 0.
Plug Taps, Dies, Collets 1¼″ diameter.

Cutting $\frac{7}{64}$ 56, $\frac{1}{8}$ 40, $\frac{9}{64}$ 40, $\frac{5}{32}$ 32, $\frac{3}{16}$ 24, $\frac{7}{32}$ 24, $\frac{1}{4}$ 20 ..... **$8.00**

Assortment No. A3.

Stock 7½″ long. Adjustable Tap Wrench No. 0.
Plug Taps, Dies, Collets 1¼″ diameter.

Cutting $\frac{7}{64}$ 56, $\frac{1}{8}$ 40, $\frac{9}{64}$ 40, $\frac{5}{32}$ 32, $\frac{11}{64}$ 36, $\frac{3}{16}$ 24, $\frac{13}{64}$ 24, $\frac{7}{32}$ 24, $\frac{15}{64}$ 24, $\frac{1}{4}$ 20 ..... **$10.50**

For list of other assortments see page 18.
For price list of dies see page 19.

Little Giant.

SCREW PLATES.

Owing to the demand for assortments of plates having dies and taps cutting sizes larger than can be used in one regular A1 Stocks (which

by the way are 1¼ inch diameter,) we are prepared to meet this demand by furnishing the assortments given below, using an entirely new line of stocks which take collets 1¼ diameter for all sizes ¼ inch and smaller, and collets 1⅝ diameter for the larger sizes. NO SIZE LARGER THAN ⅜ inch FURNISHED.

LIST OF ASSORTMENTS.

Assortment No. A10 has TWO Stocks, 7½ inches long for sizes ¼ inch and smaller.
13½ inches long for sizes larger. Price.
Cuts $\frac{1}{8}^{40}$, $\frac{5}{32}^{32}$, $\frac{3}{16}^{24}$, $\frac{7}{32}^{24}$, $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, inch $11.50

Assortment No. A12 has TWO Stocks, 7½ inches long for sizes ¼ inch and smaller.
13½ inches long for sizes larger.
Cuts, machine screw sizes, Nos. 4^{36}, 6^{32}, 8^{32}, 10^{24}, 12^{24}, 14^{20}, 16^{18}, 18^{18} 12.75

Assortment No. A14 has Stock 13½ inches long.
Cuts $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, inch 6.25

Assortment No. A15 has TWO Stocks 7½ inches long for sizes ¼ inch and smaller.
13½ inches long for larger sizes.
Cuts $\frac{1}{8}^{40}$, $\frac{5}{32}^{32}$, $\frac{3}{16}^{24}$, $\frac{7}{32}^{24}$, $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$ $\frac{3}{8}^{16}$, also Nos. 4^{36}, 6^{32}, 8^{32}, 10^{24}, 12^{24}, 14^{20}, 16^{18}, 18^{18} 21.50

Assortment No. A16 has TWO Stocks 7½ inches long for sizes ¼ inch and smaller.
13½ inches long for larger sizes.
Cuts machine screw sizes 4^{36}, 6^{32} 8^{32}, 10^{24}, 12^{24}, 14^{20}, 16^{18}, 18^{18}, 20^{16}, 24^{16} 16.00

The assortments given above are put up with ADJUSTABLE TAP WRENCHES for the different sizes given.

For Assortments cutting smaller sizes, see pages 16 and 18.

SCREW PLATES.

The following list of assortments comprises a complete list of such assortments as we have found from past experience users are constantly demanding.

LIST OF ASSORTMENTS AND PRICES.

			Price.
Assortment No.	A1.	Has Stock, Tap Wrench, Taps, Dies and Collets. Cutting $\frac{1}{8}^{40}$, $\frac{5}{32}^{32}$, $\frac{3}{16}^{24}$, $\frac{7}{32}^{24}$, $\frac{1}{4}^{20}$	$6.50
" "	A1½.	" $\frac{1}{16}^{60}$, $\frac{3}{32}^{56}$, $\frac{1}{8}^{40}$, $\frac{5}{32}^{32}$, $\frac{3}{16}^{24}$, $\frac{7}{32}^{24}$, $\frac{1}{4}^{20}$	8.00
" "	A2.	Cutting $\frac{7}{64}^{56}$, $\frac{1}{8}^{40}$, $\frac{9}{64}^{40}$, $\frac{5}{32}^{32}$, $\frac{3}{16}^{24}$, $\frac{7}{32}^{24}$, $\frac{1}{4}^{20}$	8.00
" "	A2½.	Cutting $\frac{1}{16}^{72}$, $\frac{5}{64}^{72}$, $\frac{3}{32}^{56}$, $\frac{7}{64}^{56}$, $\frac{1}{8}^{40}$, $\frac{9}{64}^{40}$, $\frac{5}{32}^{32}$, $\frac{3}{16}^{24}$, $\frac{7}{32}^{24}$, $\frac{1}{4}^{20}$	10.50
" "	A3.	Cutting $\frac{7}{64}^{56}$, $\frac{1}{8}^{40}$, $\frac{9}{64}^{40}$, $\frac{5}{32}^{32}$, $\frac{11}{64}^{32}$, $\frac{3}{16}^{24}$, $\frac{13}{64}^{24}$, $\frac{7}{32}^{24}$, $\frac{15}{64}^{24}$, $\frac{1}{4}^{20}$	10.50

Above assortments have collets 1¼ diameter, cutting **fractional sizes.**

Assortment No.	AA1.	Cutting 4^{36}, 6^{32}, 8^{32}, 10^{24}	$5.50
" "	AA2.	" 4^{36}, 6^{32}, 8^{32}, 10^{24}, 12^{24}	6.50
" "	AA3.	" 4^{36}, 6^{32}, 8^{32}, 10^{24}, 12^{24}, 14^{20}	7.00
" "	AA4.	Cutting 4^{36}, 6^{32}, 8^{32}, 10^{24}, 12^{24}, 14^{20}, 16^{18}	8.00
" "	AA5.	Cutting 2^{56}, 3^{48}, 4^{36}, 5^{32}, 6^{32}, 8^{32}	7.00
" "	AA6.	" 2^{56}, 3^{48}, 4^{36}, 5^{32}, 6^{32}, 8^{32}, 10^{24}, 12^{24}	9.00
" "	AA7.	Cutting 2^{56}, 3^{48}, 4^{36}, 5^{32}, 6^{32}, 8^{32}, 10^{24}, 12^{24}, 14^{20}, 16^{18}	10.50

Above assortments have collets 1¼ diameter, cutting **machine screw sizes.**

Assortment No.	A10.	Cutting $\frac{1}{8}^{40}$, $\frac{5}{32}^{32}$, $\frac{3}{16}^{24}$, $\frac{7}{32}^{24}$, $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$	$11.50
" "	A12.	Cutting Nos. 4^{36}, 6^{32}, 8^{32}, 10^{24}, 12^{24}, 14^{20}, 16^{18}, 18^{18}	12.75
" "	A14.	Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$	6.25
" "	A15.	" $\frac{1}{8}^{40}$, $\frac{5}{32}^{32}$, $\frac{3}{16}^{24}$, $\frac{7}{32}^{24}$, $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, 4^{36}, 6^{32}, 8^{32}, 10^{24}, 12^{24}, 14^{20}, 16^{18}, 18^{18}	21.50
" "	A16.	Cutting 4^{36}, 6^{32}, 8^{32}, 10^{24}, 12^{24}, 14^{20}, 16^{18}, 18^{18}, 20^{16}, 24^{16}	16.00

Above assortments have stock, dies and collets to ¼ fractional.

No. 14 Screw size, 1¼ diameter.

Above assortments have stock, dies and collets above ¼ fractional.

No. 14 Machine Screw size, 1⅝ diameter.

For description of these assortments, see page 16.

For price list of parts, also for additional sizes and pitch, see page 19.

For price list of assortments of larger sizes, see page 29.

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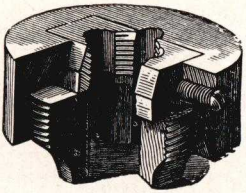
SCREW PLATES.

ADJUSTABLE DIES AND COLLETS.



PRICE LIST—PARTS OF SCREW PLATES. PAGES 16–18

Size of Gauge	Regular Threads.	Threads also Furnished.	Dies for 1¼ Collets, Price each.	Taps, Price each.
2	56	48, 64	$0.60	$0.35
3	48	40, 56	.60	.35
4	36	32, 40, 42, 48	.60	.35
5	36	32, 40	.60	.35
6	32	30, 36, 38, 40' 48	.60	.35
7	32	30, 40	.60	.35
8	32	30, 36, 40	.60	.35
9	30	28, 32	.60	.35
10	24	28, 30, 32, 36	.60	.35
11	24	28, 30	.60	.35
12	24	20, 32	.60	.35
13	22	20, 24, 32	.60	.38
14	20	18, 24	.60	.38
15	20	18, 24	.60	.38
16	18	16, 20	.60	.38
1/16	72	60. 64	.60	.35
5/64	72	56, 60, 64	.60	.35
3/32	56	48, 50, 54, 60	.60	.35
7/64	56	48,	.60	.35
1/8	40	32 36, 48, 50	.60	.35
9/64	40	32, 36	.60	.35
5/32	32	30, 36, 40	.60	.35
3/16	24	30. 32, 36	.60	.35
7/32	24	32,	.60	.35
1/4	20	24 27, 32	.60	.45
17/64	20	24, 27, 32	.60	.45
9/32	20	24. 27, 32	.60	.45

Collets 40 cents each. Stocks 70 cents each.

PRICE LIST OF PARTS.

Fitting 1⅝ Diameter Stocks.

Size.	Regular Threads.	"V" Threads also furnished.	Dies for 1⅝ Collets, Price each.	Taps, Price each
14	20	18, 24	$1.00	$0.38
15	20	18. 24	1.00	.38
16	18	16, 20	1.00	.38
18	18	16, 20	1.00	.38
20	16	18,	1.00	.45
22	16	18,	1.00	.45
24	16	14, 18	1.25	.45
1/4	20	24. 27, 32	1.00	.45
5/16	18	20, 24, 27, 32	1.00	.50
3/8	16	14, 18, 20, 24, 27	1.25	.55

Collets $0.50 each. Stock $1.25.

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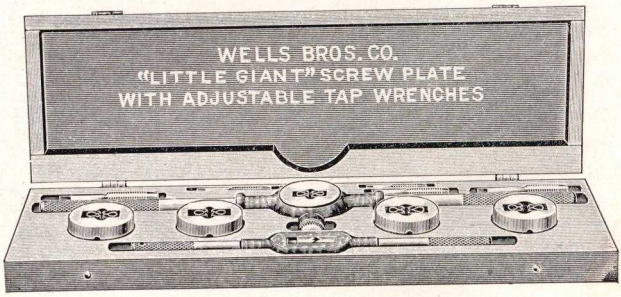
SCREW PLATES.

Assortment No. 1.

Stock 14½″ long. Adjustable Tap Wrench No. 5.
Taper Taps, Dies, Collets 2 diam.

Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$ **$12.00**



Assortment No. 2.

Stock 23″ long. Adjustable Tap Wrench No. 6.
Taper Taps, Dies, Collets 2¾ diam.

Cutting $\frac{1}{4}^{20}$, $\frac{3}{8}^{16}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$ **$13.50**

"V" threads oversize furnished unless otherwise ordered.

"V" exact sizes, U. S. S. and Whitworth threads furnished at same list prices.

For list prices on Tap Wrenches furnished with these assortments, see page 215.

For list prices on other parts, see pages 30–31.

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SCREW PLATES.

Assortment No. 3.

Stock 26″ long. Adjustable Tap Wrench No. 7.

Taper Taps, Dies, Collets 2¾ diam.

Cutting $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8} **$15.00**

Assortment No. 4.

Stock 26″ long. Adjustable Tap Wrench No. 7.

Taper Taps, Dies, Collets 2¾ diam.

Cutting $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8} **$17.50**

"V" threads oversize furnished unless otherwise ordered.

"V" threads exact, U. S. S. and Whitworth threads furnished at same list prices.

For list prices on Tap Wrenches furnished with these assortments, see page 215.

For list prices on other parts, see pages 30–31.

Little Giant.

SCREW PLATES.

Assortment No. 5.

Stock 23″ long. Adjustable Tap Wrench No. 6.

Taper Taps, Dies, Collets 2¾ diam.

22 Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$ **$16.00**

Assortment No. 5½.

Stock 23″ long. Adjustable Tap Wrench No. 6.

Taper Taps, Dies, Collets 2¾ diam.

Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{9}{16}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$..... **$18.50**

"V" threads oversize furnished unless otherwise ordered.

"V" threads exact sizes, U. S. S. and Whitworth threads furnished at same list prices.

For list prices on Tap Wrenches furnished with these assortments, see page 215.

For list prices on other parts, see pages 30–31.

Little Giant.

SCREW PLATES.

Assortment No. 6.

Stock 26″ long. Adjustable Tap Wrench **No. 7.**

Taper Taps, Dies, Collets, 2¾″ Diam.

Cutting $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8} **$22.00**

LIST OF SCREW PLATES CONTINUED ON NEXT PAGE.

V THREADS OVERSIZE.

Notice is given that unless otherwise ordered Screw Plates, etc. will be sent with "V" threads oversize unless otherwise ordered.

We wish to call your particular attention to the manner in which we do this.

The three first sizes of Screw Plates, namely ¼, $\frac{5}{16}$ and ⅜″ are furnished $\frac{1}{64}$″ oversize and larger sizes are sent $\frac{1}{32}$″ oversize.

We trust you will take particular notice of this as "Little Giant" Screw Plates are sent out in this way.

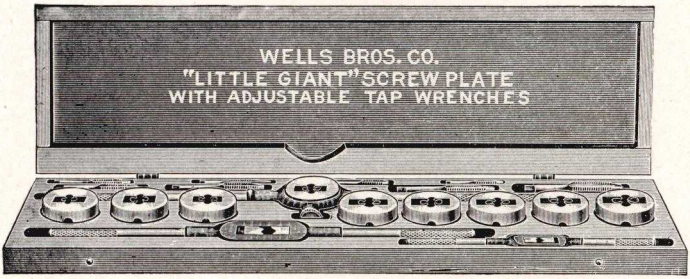
In our opinion it is better to furnish them in this way than to send all $\frac{1}{32}$ large.

Makers of iron manufacture rods closer to size than was done when rods were first machine made. Then there was a large amount of extra material while now there is a great deal less. $\frac{1}{64}$″ oversize on diameters to ⅜″ inclusive is enough to remove all excess stock.

We call this to your particular attention as errors are possible in ordering $\frac{1}{32}$″ oversize on all sizes, whereas the sizes referred to are only wanted $\frac{1}{64}$″ oversize.

Little Giant.

SCREW PLATES.



Assortment No. 7.

Stock 26″ long. Two Adjustable Tap Wrenches Nos. 5 and 7.

Taper Taps, Dies, Collets 2¾″ Diam.

Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8} **$25.50**

Assortment No. 7½.

Stock 26″ long. Two Adjustable Tap Wrenches Nos. 5 and 7.

Taper Taps, Dies, Collets 2¾″ Diam.

Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{9}{16}^{12}$, $\frac{5}{8}^{11}$ $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8} **$28.00**

"V" threads oversize furnished unless otherwise ordered.

"V" threads exact sizes, U. S. S. and Whitworth threads furnished at same list prices.

For list prices on Tap Wrenches furnished with these assortments, see page 215.

For list prices on other parts, see pages 30–31.

Little Giant.

SCREW PLATES.

Assortment No. 8.

Two Stocks 14½″ and 26″ long. Adjustable Tap Wrench No. 6.

Taper Taps, Dies.

Collets for four smaller sizes 2″ diam. For larger sizes, 2¾″ diam.
Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$ **$18.00**

Assortment No. 9.

Two Stocks 14½″ and 29″ long. Two Adjustable Tap Wrenches Nos. 5, 7.

Taper Taps, Dies.

Collets for four smallest sizes 2″ diam. For larger sizes, 2¾″ diam.
Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$,
$\frac{7}{8}^{9}$, 1^{8} **$27.50**

"V" threads oversize furnished unless otherwise ordered.

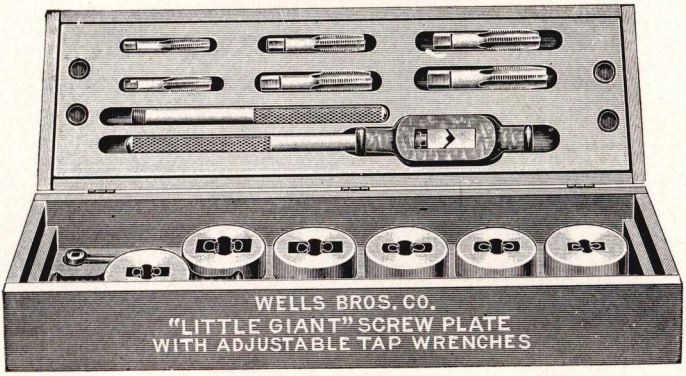
"V" threads exact sizes, U. S. S. and Whitworth threads furnished at same list prices.

For list prices on Tap Wrenches furnished with these assortments, see page 215.

For list prices on other parts, see pages 30–31.

Little Giant.

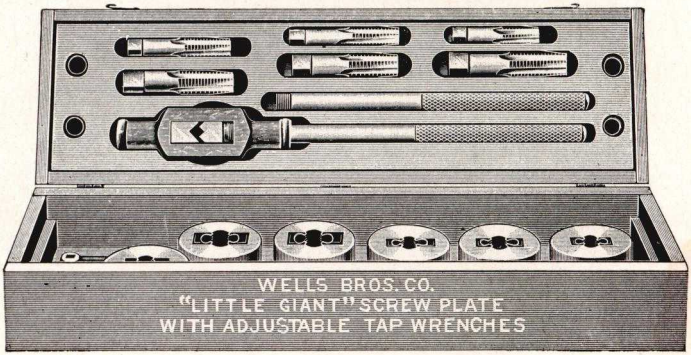
SCREW PLATES.



Assortment No. 20.

Stock 40″ long. Adjustable Tap Wrench No. 7½.
Taper Taps, Dies, Collets 4″ diam.

Cutting $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8}, $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$ **$35.00**



Assortment No. 25.

Stock 52″ long. Adjustable Tap Wrench No. 8.
Taper Taps, Dies, Collets 4½″ diam.

Cutting $\frac{7}{8}^{9}$, 1^{8}, $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$, $1\frac{3}{8}^{6}$, $1\frac{1}{2}^{6}$ **$45.00**

"V" threads oversize furnished unless otherwise ordered.

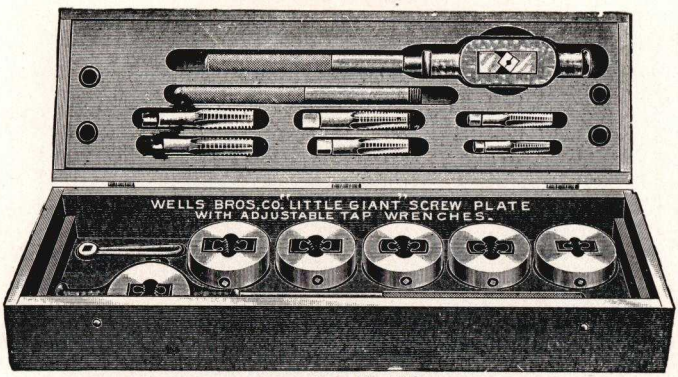
"V" thread exact sizes, U. S. S. and Whitworth threads furnished at same list prices.

For list prices on Tap Wrenches furnished with these assortments, see page 215.

For list prices on other parts, see pages 30–31.

Little Giant.

SCREW PLATES.



Assortment No. 30.

Stock 52″ long. Adjustable Tap Wrench No. 8.
Taper Taps, Dies, Collets $4\frac{1}{2}$″ diameter.
Cutting $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$, $1\frac{3}{8}^{6}$, $1\frac{1}{2}^{6}$ **$37.50**

Assortment No. 40

Two Stocks 23″ and 40″ long. Two Adjustable Tap Wrenches, Nos. 6 and $7\frac{1}{2}$.
Taper Taps, Dies.
Collets $2\frac{3}{4}$″ diameter for first seven sizes, 4″ diameter for larger.
Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8} $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$ **$40.00**

"V" threads oversize furnished unless otherwise ordered.

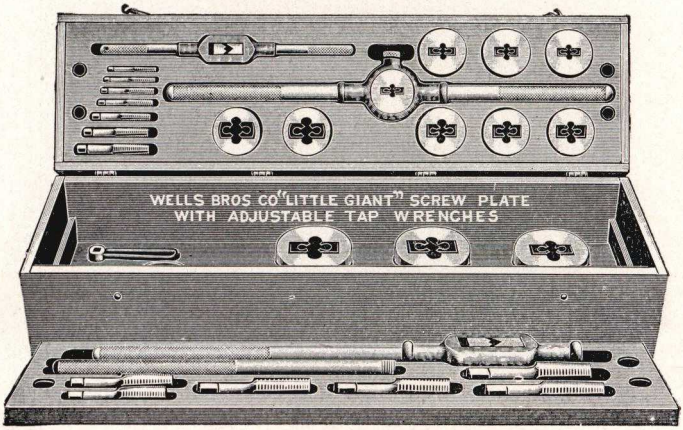
"V" threads, exact sizes, U. S. S. and Whitworth threads furnished at same list prices.

For list prices on Tap Wrenches furnished with these assortments, see page 215.

For list prices on other parts, see pages 30–31.

Little Giant.

SCREW PLATES.



Assortment No. 50.

Two Stocks 26″ and 52″ long. Two adjustable Tap Wrenches Nos. 6 and 18.

Taper Taps—Dies.

Collets 2¾″ diam. for first nine sizes. 4½″ diam. for larger sizes.

Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$ $\frac{7}{8}^{9}$, 1^{8}, $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$, $1\frac{3}{8}^{6}$, $1\frac{1}{2}^{6}$ **$60.00**

For prices on Screw Plates cutting to 2 inches, see pages 53–55.

Above cut shows one of the Stocks used in our assortments of Screw Plates. This shows our latest style of finish. It is the handsomest finish in the market, and will please you.

HANDLES ARE KNURLED. IT KEEPS GREASY HANDS FROM SLIPPING.

Little Giant.

SCREW PLATES.

LIST OF ASSORTMENTS.

Each Assortment is put up in a neat Wood Case, as shown in Cuts.

		Price
No. A1	Cuts 1/8, 5/32, 3/16, 7/32, 1/4	$6.50
No. A2	Cuts 7/64, 1/8, 9/64, 5/32, 3/16, 7/32, 1/4	8.00
No. A3	Cuts 7/64, 1/8, 9/64, 5/32, 11/64, 3/16, 13/64, 7/32, 15/64, 1/4	10.50
No. A10	Cuts 1/8, 5/32, 3/16, 7/32, 1/4, 5/16, 3/8	11.50
No. A12	Cuts 4, 6, 8, 10, 12, 14, 16, 18	12.75
No. A14	Cuts 1/4, 5/16, 3/8	6.25
No. 1	Cuts 1/4, 5/16, 3/8, 7/16, 1/2	12.00
No. 2	Cuts 1/4, 3/8, 1/2, 5/8, 3/4	13.50
No. 3	Cuts 5/8, 3/4, 7/8, 1	15.00
No. 4	Cuts 1/2, 5/8, 3/4, 7/8, 1	17.50
No. 5	Cuts 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4	16.00
No. 5½	Cuts 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4	18.50
No. 6	Cuts 3/8, 7/16, 1/2, 5/8, 3/4, 7/8, 1	22.00
No. 7	Cuts 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 7/8, 1	25.50
No. 7½	Cuts 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4, 7/8, 1	28.00
No. 8	Cuts 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4	18.00
No. 9	Cuts 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 7/8, 1	27.50
No. 20	Cuts 5/8, 3/4, 7/8, 1, 1 1/8, 1 1/4	35.00
No. 25	Cuts 7/8, 1, 1 1/8, 1 1/4, 1 3/8, 1 1/2	45.00
No. 30	Cuts 1 1/8, 1 1/4, 1 3/8, 1 1/2	37.50
No. 40	Cuts 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 7/8, 1, 1 1/8, 1 1/4	40.00
No.. 50	Cuts 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 7/8, 1, 1 1/8, 1 1/4, 1 3/8, 1 1/2	60.00

For detailed description of above Assortments giving diameter of collets, length of stocks, etc., see pages just preceding.

Each Assortment has ADJUSTABLE TAP WRENCHES for holding all sizes of taps contained in Assortment.

For Machinists' Sets furnished with sets of taps (Taper, Plug, and Bottoming), see pages 32 to 40.

For list of complete Assortments of smaller sizes, see page 8.

For full Stocked Assortments see pages 42 to 51.

For prices on Assortments cutting to 2 inches see pages 53–55.

"V" threads oversize furnished unless otherwise ordered.

"V" exact sizes, U. S. S. and Whitworth threads furnished at same list prices.

For list prices on Taps Wrenches furnished with these assortments, see page 215.

For list prices on other parts, see pages 30–31.

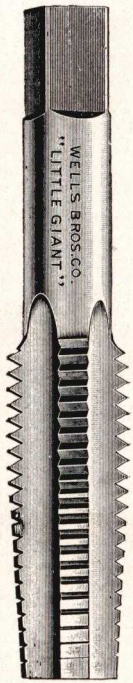
Little Giant.

SCREW PLATES.

LIST PRICE OF TAPS, DIES, ETC.,

FOR THE "LITTLE GIANT" SCREW PLATES.

As Listed on Pages 20 to 29.



Diameter Inches	Regular Number of "V" Thds. per Inch	Price of Tap	Price of Die	Price of Collet Plates Nos. 1 to 0	Price of Collet Plates Nos. 20 to 50
3/16	24	$ .35	$1.00	$ .50	
1/4	20	.45	1.00	.50	
5/16	18	.50	1.00	.50	
3/8	16	.55	1.25	.50	
7/16	14	.60	1.25	.50	
1/2	12	.70	1.50	.50	
9/16	12	.80	1.50	.50	
5/8	11	.90	1.75	.50	$1.50
11/16	11	1.05	1.75	.50	1.50
3/4	10	1.20	2.00	.50	1.50
13/16	10	1.40	2.00	.50	1.50
7/8	9	1.60	2.75	.50	1.50
15/16	9	1.80	2.75	.50	1.50
1	8	2.00	2.75	.50	1.50
1 1/8	7	2.25	4.00		1.50
1 1/4	7	2.60	4.00		1.50
1 3/8	6	3.00	5.00		1.50
1 1/2	6	3.50	5.00		1.50

Left hand Taps and Dies furnished at regular prices in threads regularly listed.

For list of sizes and threads furnished at regular prices, see Hand Tap List page 102.

For price list of parts of collets and other parts of Screw Plates, see page 31.

Little Giant.

PRICE LIST OF PARTS.

SCREW PLATES.

PAGES 20 TO 29.

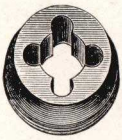
PRICE LIST OF STOCKS.

Stock	7½	in.	long	for collets	1¼	diameter,	.....	$0.70
"	13½	"	"	"	1⅝	"	.....	1.25
"	14½	"	"	"	2	"	.....	1.50
"	23	"	"	"	2¾	"	.....	2.00
"	26	"	"	"	2¾	"	.....	2.00
"	29	"	"	"	2¾	"	.....	2.00
"	40	"	"	"	4	"	.....	6.00
"	52	"	"	"	4½	"	.....	8.00

When ordering give number of assortment which you wish stocks for.
For prices on Tap Wrenches, see page 215.

PRICE LIST OF COLLETS.

Size of Die.	Diameter of Collet.	Guide.	Cap.	Complete.
No. A1, 7/64 to ¼	1¼	$0.15	$0.25	$0.40
" A10, A12, A14	1⅝	.15	.35	.50
" 1, ¼ to ½	2	.20	.30	.50
" 6, ¼ to 1	2¾	.20	.30	.50
" 20, ⅝ to 1¼	4	.50	1.00	1.50
" 30, 1⅛ to 1½	4½	.50	1.00	1.50

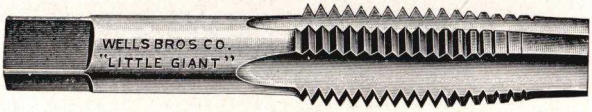


GUIDE

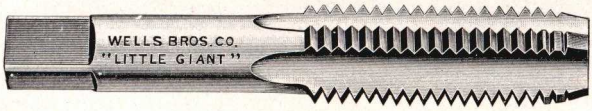
When ordering, give diameter of collet wanted, also cutting size of die with which collet is to be used.

SCREW PLATES

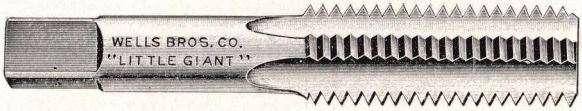
WITH SETS OF MACHINISTS' HAND TAPS.



Taper



Plug



Bottoming

The assortments listed on the following pages cut the same sizes as Screw Plates shown on pages 20 to 29 but these plates are all sent with a set of Taps, (Taper, Plug and Bottoming) for each size.

Cases are made to hold all tools contained in assortment, which comprises Taps, Tap Wrenches, Stocks, Dies and Collets.

These sets will be furnished with "V" thread *exact sizes* unless otherwise ordered.

"V" threads oversize, U. S. S. and Whitworth threads furnished at same list prices.

Little Giant.

SCREW PLATES.

WITH SETS OF MACHINISTS' HAND TAPS.

Assortment No. 101.

Has Stock 14½″ long. Adjustable Tap Wrench, No. 5.

TAPER, PLUG AND BOTTOMING HAND TAPS.

Dies and Collets 2″ diameter.

Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$ **$15.50**

Assortment No. 102.

Has Stock 23″ long. Adjustable Tap Wrench, No. 6.

TAPER, PLUG AND BOTTOMING HAND TAPS.

Dies and Collets 2¾″ diameter.

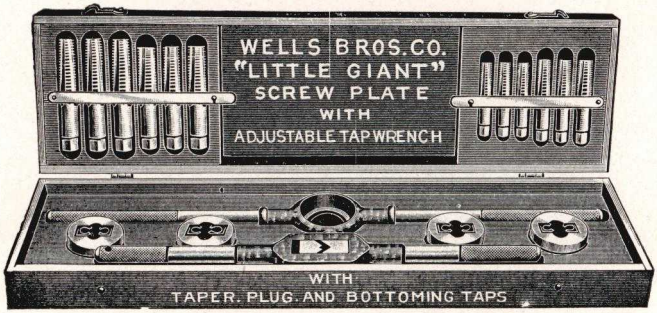
Cutting $\frac{1}{4}^{20}$, $\frac{3}{8}^{16}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$ **18.00**

"V" threads exact sizes sent unless otherwise ordered. U. S. S. and Whitworth threads furnished at same list prices. For list prices of Tap Wrenches furnished with these assortments see page 215.

Little Giant

SCREW PLATES.

WITH SETS OF MACHINISTS' HAND TAPS.



Assortment No. 103.
Has Stock 26″ long. Adjustable Tap Wrench No. 7.
TAPER, PLUG AND BOTTOMING HAND TAPS.
Dies and Collets, 2¾″ diam.
Cutting $\frac{5}{8}^{1}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8} **$22.00**

Assortment No. 104.
Has Stock 26″ long. Adjustable Tap Wrench No. 7.
TAPER, PLUG AND BOTTOMING HAND TAPS.
Dies and Collets 2¾″ diam.
Cutting $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8} **$25.00**

"V" threads exact sizes sent unless otherwise ordered.

U. S. S. and Whitworth threads furnished at same list prices.

For list prices of Tap Wrenches furnished with these assortments, see page 215.

For list prices of other parts, see pages 31 and 41.

Little Giant.

SCREW PLATES.

WITH SETS OF MACHINISTS' HAND TAPS.

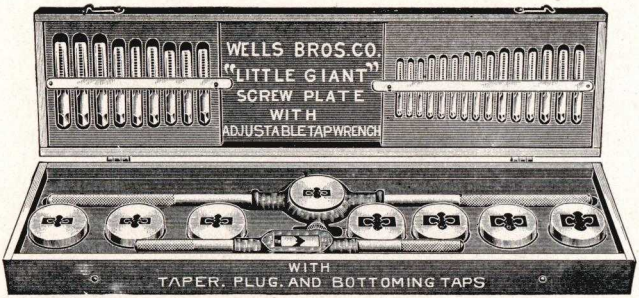
Assortment No. 105.

Has Stock 23″ long. Adjustable Tap Wrench No. 6.

TAPER, PLUG AND BOTTOMING HAND TAPS.

Dies and Collets 2¾″ diam.

Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$ **$22.00**



Assortment No. 105½.

Has Stock 23″ long. Adjustable Tap Wrench No. 6.

TAPER, PLUG AND BOTTOMING HAND TAPS.

Dies and Collets, 2¾″ diam.

Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{9}{16}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$ **$25.25**

"V" threads exact sizes furnished unless otherwise ordered.

"V" oversize, U. S. S. and Whitworth threads furnished at same prices.

For list prices of Tap Wrenches furnished with these assortments, see page 215.

For list prices of other parts, see pages 31 and 41.

Little Giant.

SCREW PLATES.

WITH SETS OF MACHINISTS' HAND TAPS.

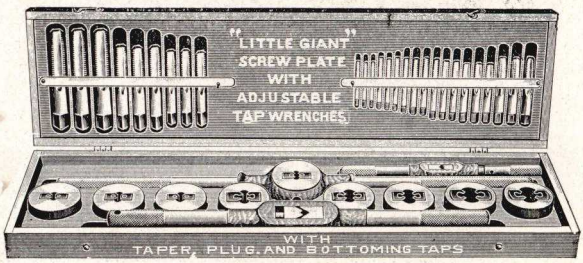
Assortment No. 106.

Has Stock 26″ long. Adjustable Tap Wrench No. 7.

TAPER, PLUG AND BOTTOMING HAND TAPS.

Dies and Collets, 2¾″ diam.

Cutting $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8} **$31.25**



Assortment No. 107.

Has Stock 26″ long. Two Adjustable Tap Wrenches Nos. 5 and 7.

TAPER, PLUG AND BOTTOMING HAND TAPS.

Dies and Collets 2¾″ diam.

Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8}.... **$36.00**

"V" threads exact sizes furnished unless otherwise ordered.

"V" oversize, U. S. S. and Whitworth threads furnished at same price.

For list prices of Tap Wrenches furnished with these assortments, see page 215.

For list prices of other parts see pages 31 and 41.

Little Giant.

SCREW PLATES.

WITH SETS OF MACHINISTS' HAND TAPS.

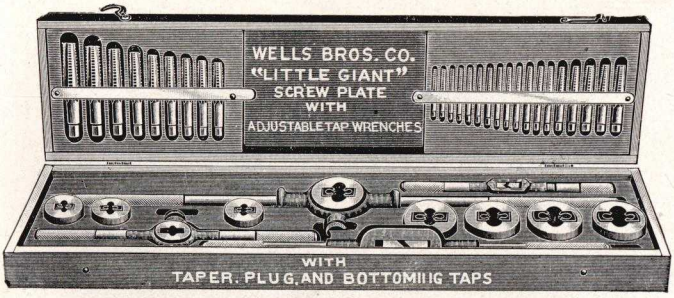
Assortment No. 108.

Two Stocks 14½ and 26″ long. Adjustable Tap Wrench No. 6.

TAPER, PLUG AND BOTTOMING HAND TAPS.

Dies and Collets for four smallest sizes 2″ diam.
Dies and Collets for larger sizes 2¾″ diam.

Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$ **$24.00**



Assortment No. 109.

Two Stocks 14½″ and 29″ long. Two Adjustable Tap Wrenches Nos. 5, 7.

TAPER, PLUG AND BOTTOMING HAND TAPS.

Dies and Collets of four smaller sizes, 2″ diam.
Dies and Collets of larger sizes, 2¾″ diam.

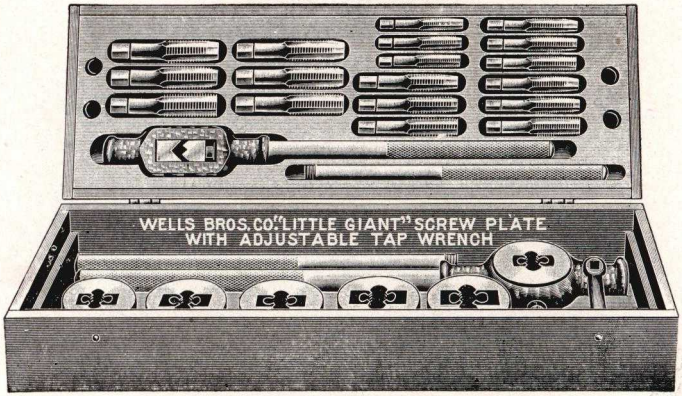
Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$ $\frac{7}{8}^{9}$ 1^{8} **$38.00**

"V" threads exact sizes furnished unless otherwise ordered.
"V" oversize, U. S. S. or Whitworth threads sent at same prices.

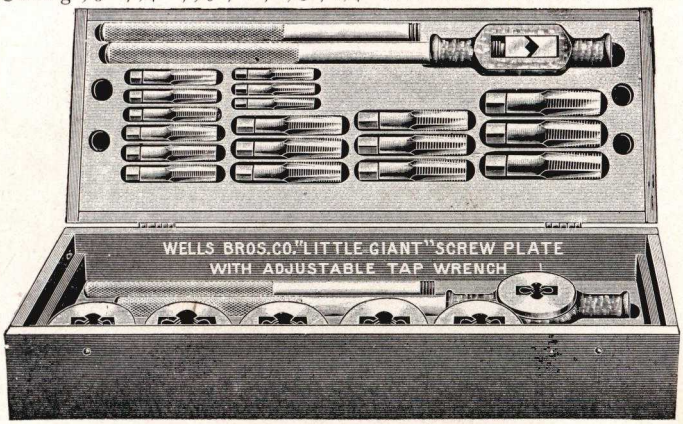
For prices of Tap Wrenches furnished with these assortments see page 215.

For list prices of other parts, see pages 31 and 41.

Little Giant



Assortment No. 120.
Has Stock 40 inches long. Adjustable Tap Wrench **No. 7½.**
TAPER, PLUG AND BOTTOMING HAND TAPS
Dies and Collets 4″ diameter.
Cutting $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8}, $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$ **$47.50**

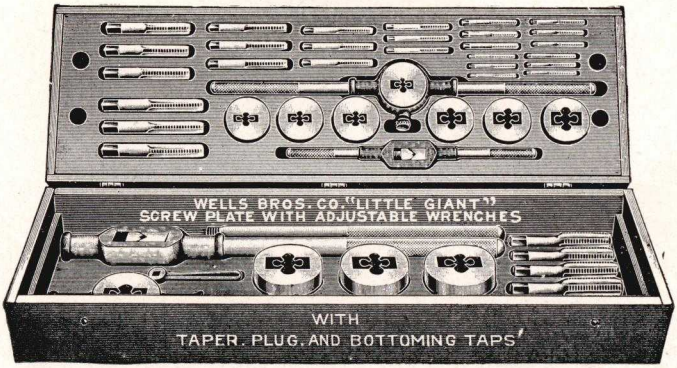


Assortment No. 125.
Has Stock 52 inches long. Adjustable Tap Wrench **No. 8.**
TAPER, PLUG AND BOTTOMING HAND TAPS.
Dies and Collets, 4½″ diameter.
Cutting $\frac{7}{8}^{9}$ 1^{8}, $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$, $1\frac{3}{8}^{6}$, $1\frac{1}{2}^{6}$ **$63.00**

Assortment No. 130.
Has Stock 52 inches long. Adjustable Tap Wrench **No. 8.**
TAPER, PLUG AND BOTTOMING HAND TAPS.
Dies and Collets, 4½″ diameter.
Cutting $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$, $1\frac{3}{8}^{6}$, $1\frac{1}{2}^{5}$ **$51.00**

"V" threads exact sizes furnished unless otherwise ordered.
U. S. S. and Whitworth threads furnished at same list prices.
For list prices on Tap Wrenches furnished with these assortments, see page 215.
For list prices on other parts, see pages 31 and 41.

Little Giant.



Assortment No. 140.

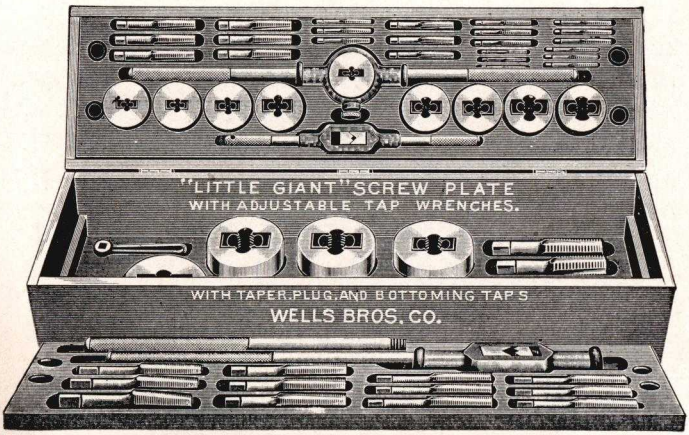
Has Two Stocks 23″ and 40″ long. Two Adjustable Tap Wrenches, **Nos. 6** and **7½**.

TAPER, PLUG AND BOTTOMING HAND TAPS.

Dies and Collets for first seven sizes, 2¾″ diameter.

Dies and Collets for larger sizes, 4″ diameter.

Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8}, $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$ **$55.00**



Assortment No. 150.

Has Two Stocks 26″ and 52″ long. Two Adjustable Tap Wrenches, **Nos. 6** and **8**.

TAPER, PLUG AND BOTTOMING HAND TAPS.

Dies and Collets for first nine sizes, 2¾″ diameter.

Dies and Collets for larger sizes, 4½″ diameter.

Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8}, $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$, $1\frac{3}{8}^{6}$, $1\frac{1}{2}^{6}$ **$84.00**

"V" threads exact sizes furnished unless otherwise ordered.

U. S. S. and Whitworth threads furnished at same list prices.

For list prices on Tap Wrenches furnished with these assortments, see page 215.

For list prices on other parts, see pages 31 and 41.

SCREW PLATES.

WITH SETS OF MACHINISTS' HAND TAPS.

LIST OF ASSORTMENTS.

Asst. No. 101	Cutting 1/4, 5/16, 3/8, 7/16, 1/2	**$15.50**
Asst. No. 102	Cutting 1/4, 3/8, 1/2, 5/8, 3/4	**18.00**
Asst. No. 103	Cutting 5/8, 3/4, 7/8, 1	**22.00**
Asst. No. 104	Cutting 1/2, 5/8, 3/4, 7/8, 1	**25.00**
Asst. No. 105	Cutting 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4,	**22.00**
Asst. No. 105½	Cutting 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4	**25.25**
Asst. No. 106	Cutting 3/8, 7/16, 1/2, 5/8, 3/4, 7/8, 1	**31.25**
Asst. No. 107	Cutting 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 7/8, 1	**36.00**
Asst. No. 108	Cutting 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4	**24.00**
Asst. No. 109	Cutting 1/4, 5/16, 3/8, 7/16, 1/2, 5/8 3/4, 7/8, 1	**38.00**
Asst. No. 120	Cutting 5/8, 3/4, 7/8, 1, 1 1/8, 1 1/4	**47.50**
Asst. No. 125	Cutting 7/8, 1, 1 1/8, 1 1/4, 1 3/8, 1 1/2	**63.00**
Asst. No. 130	Cutting 1 1/8, 1 1/4, 1 3/8, 1 1/2	**51.00**
Asst. No. 140	Cutting 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 7/8, 1, 1 1/8, 1 1/4	**55.00**
Asst. No. 150	Cutting 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 7/8, 1, 1 1/8, 1 1/4, 1 3/8, 1 1/2	**84.00**

For Screw Plates cutting to 2 inches, see pages 53–55.

"V" threads exact sizes will be sent unless otherwise specified.

"V" oversize, U. S. S. and Whitworth Threads sent when wanted at same price.

For list prices of Tap Wrenches furnished with these assortments, see page 215.

For prices of other parts, see pages 31 and 41.

Little Giant.

SCREW PLATES.

LIST PRICE OF TAPS, DIES, ETC.,

FOR THE "LITTLE GIANT" SCREW PLATES.

As Listed on Pages 32 to 40.

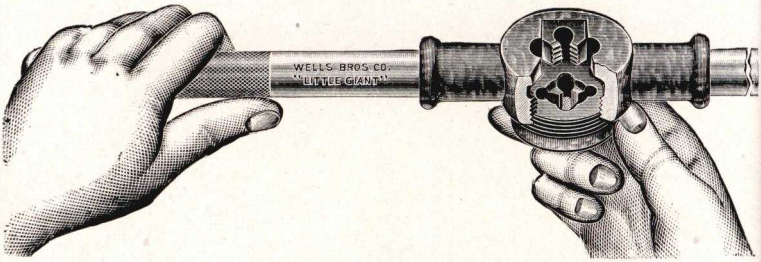
Diameter Inches	Regular Number of "V" Thds. per inch	Price of one Tap	Price of Taps per set Taper, Plug and Bottoming	Price of of Die	Price of Collets for Plates Nos. 101 to 107	Pirce of Collets for Plates Nos. 120 to 150
$\frac{3}{16}$	24	$ .35	$1 .05	$1 .00	$ .50	
$\frac{1}{4}$	20	.45	1 .35	1 .00	.50	
$\frac{5}{16}$	18	.50	1 .50	1 .00	.50	
$\frac{3}{8}$	16	.55	1 .65	1 .25	.50	
$\frac{7}{16}$	14	.60	1 .80	1 .25	.50	
$\frac{1}{2}$	12	.70	2 .10	1 .50	.50	
$\frac{9}{16}$	12	.80	2 .40	1 .50	.50	
$\frac{5}{8}$	11	.90	2 .70	1 .75	.50	$1 .50
$\frac{11}{16}$	11	1 .05	3 .15	1 .75	.50	1 .50
$\frac{3}{4}$	10	1 .20	3 .60	2 .00	.50	1 .50
$\frac{13}{16}$	10	1 .40	4 .20	2 .00	.50	1 .50
$\frac{7}{8}$	9	1 .60	4 .80	2 .75	.50	1 .50
$\frac{15}{16}$	9	1 .80	5 .40	2 .75	.50	1 .50
1	8	2 .00	6 .00	2 .75	.50	1 .50
$1\frac{1}{8}$	7	2 .25	6 .75	4 .00		1 .50
$1\frac{1}{4}$	7	2 .60	7 .80	4 .00		1 .50
$1\frac{3}{8}$	6	3 .00	9 .00	5 .00		1 .50
$1\frac{1}{2}$	6	3 .50	10 .50	5 .00		1 .50

Left hand Taps and Dies of regular thread furnished at same prices.

For price list of parts of collets, stocks, etc., see page 31.

For price list of Tap Wrenches furnished with above assortments, see page 215.

FULL STOCKED SCREW PLATES.



The above cut shows our full Stocked Die as furnished in our Full Stocked Screw Plates listed on the next pages.

MOTTLED FINISH.

This is something new on this style plate. Formerly these were sent out with the black finish.

The Mottled Finish which we had been putting on our single stocked Screw plates became so popular that we decided to finish our full Stocked plates in the same way. Since doing this we have found that it is appreciated by all.

KNURLED HANDLES.

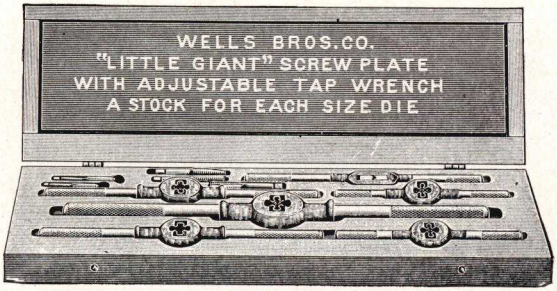
All Full Stocked Screw Plates as well as the Single Stocked Plates are furnished with Knurled Handles which prevent greasy hands from slipping.

ADJUSTABLE TAP WRENCHES.

Made of Drop Forgings with jaws of Tool Steel are also furnished in "Little Giant" Screw Plates, at practically no extra cost. See page 251.

Little Giant

FULL STOCKED SCREW PLATES.

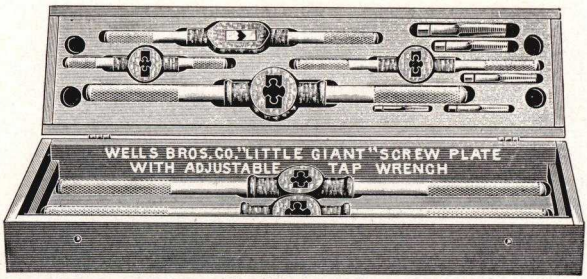


Assortment No. 61.

Has Stock for each size Die. Adjustable Tap Wrench No. 5.

DIES AND TAPER TAPS.

Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$ **$12.00**



Assortment No. 62.

Has Stock for each size Die. Adjustable Tap Wrench No. 6.

DIES AND TAPER TAPS.

Cutting $\frac{1}{4}^{20}$, $\frac{3}{8}^{16}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$ **$15.50**

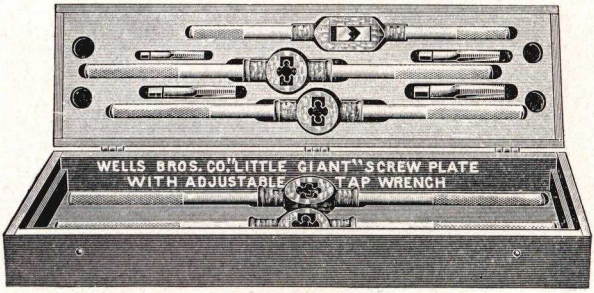
"V" threads oversize furnished unless otherwise ordered.

"V" threads exact sizes, U. S. S. and Whitworth threads furnished at same list prices.

For list prices on Tap Wrenches furnished with these assortments, see page 215.

For list prices on other parts, see page 51.

FULL STOCKED SCREW PLATES.

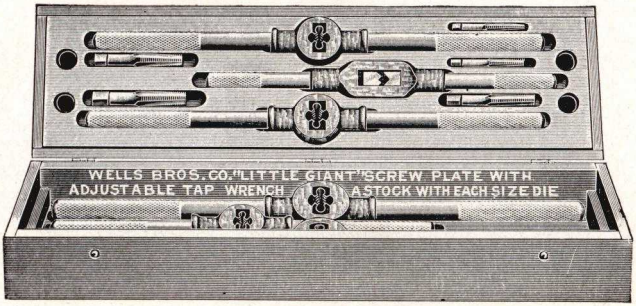


Assortment No. 63.

Has Stock for each size Die. Adjustable Tap Wrench No 7.

DIES AND TAPER TAPS.

Cutting $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8} **$17.00**



Assortment No. 64.

Has Stock for each size Die. Adjustable Tap Wrench No 7.

DIES AND TAPER TAPS.

Cutting $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8} **$19.50**

"V" threads oversize furnished unless otherwise ordered.

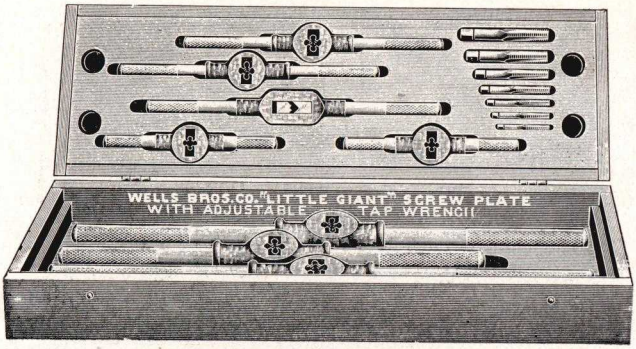
"V" threads exact sizes, U. S. S. and Whitworth threads furnished at same list prices.

For list prices on Tap Wrenches furnished with these assortments see page 215.

For list prices on other parts, see page 51.

Little Giant

FULL STOCKED SCREW PLATES

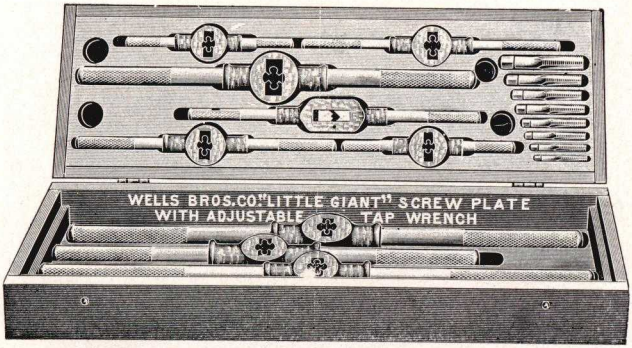


Assortment No. 65.

Has Stock for each size Die. Adjustable Tap Wrench No. 6.

DIES AND TAPER TAPS.

Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$ **$18.00**



Assortment No. 65½.

Has Stock for each size Die. Adjustable Tap Wrench No. 6.

DIES AND TAPER TAPS.

Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{9}{16}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$ **$20.50**

"V" threads oversize furnished unless otherwise ordered

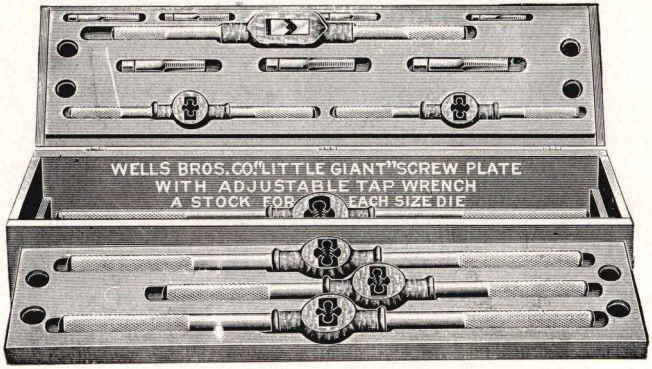
"V" threads exact sizes, U. S. S. and Whitworth threads furnished at regular prices.

For list prices of Tap Wrench furnished with these assortments see page 215.

For list prices on other parts, see page 51.

Little Giant.

FULL STOCKED SCREW PLATES.



Assortment No. 66.

Has Stock for each size Die. Adjustable Tap Wrench No. 7.

DIES AND TAPER TAPS.

Cutting $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8} **$24.00**

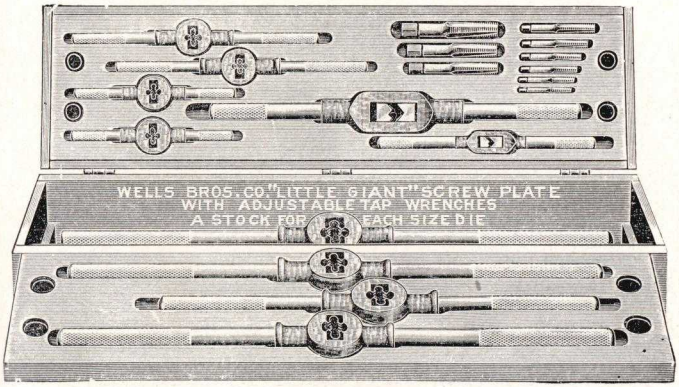
List of Assortments Continued on Next Page.

USERS OF SCREW PLATES AND TAPS SHOULD NOT LOSE SIGHT OF THE FACT THAT "LITTLE GIANT" SCREW PLATES ARE REGULARLY LISTED TO CONTAIN ADJUSTABLE TAP WRENCHES.

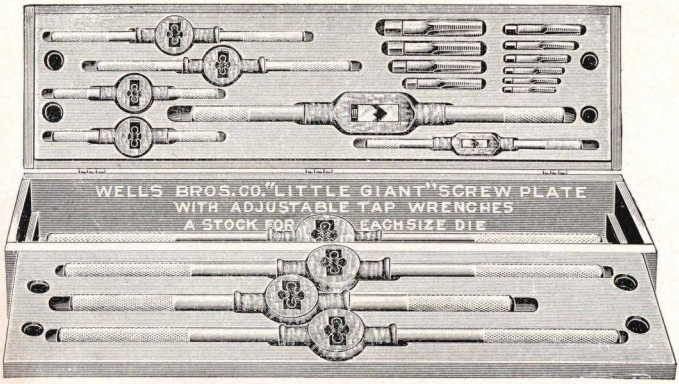
Do not be deceived by lower prices, but see that you get what you pay for. We put these Wrenches in our sets, for that is the only way to make a complete set of these tools.

Little Giant.

FULL STOCKED SCREW PLATES.



Assortment No. 67.
Has Stock for each size Die. Two Adjustable Tap Wrenches, **Nos. 5** and **7.**
DIES AND TAPER TAPS.
Cutting $\frac{1}{4}$ 20, $\frac{5}{16}$ 18, $\frac{3}{8}$ 16, $\frac{7}{16}$ 14, $\frac{1}{2}$ 12 $\frac{5}{8}$ 11, $\frac{3}{4}$ 10, $\frac{7}{8}$ 9, 1 8 ..... $29.50



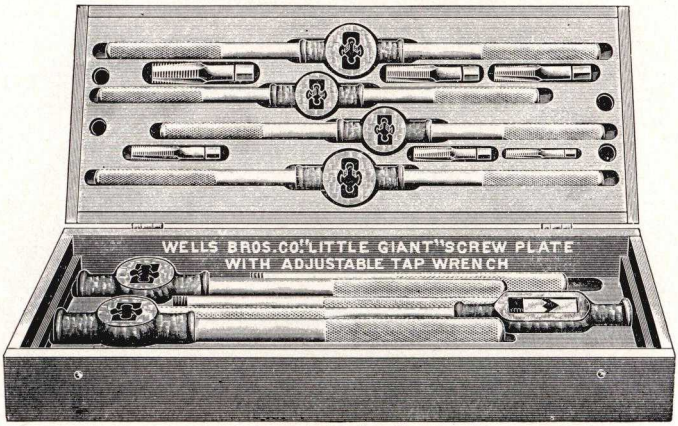
Assortment No 67½
Has Stock for each size Die. Two Adjustable Tap Wrenches, **Nos. 5** and **7.**
DIES AND TAPER TAPS.
Cutting $\frac{1}{4}$ 20, $\frac{5}{16}$ 18, $\frac{3}{8}$ 16, $\frac{7}{16}$ 14, $\frac{1}{2}$ 12, $\frac{9}{16}$ 12, $\frac{5}{8}$ 11, $\frac{3}{4}$ 10, $\frac{7}{8}$ 9, 1 8 ..... $32.00

"V" threads oversize furnished unless otherwise ordered.
"V" threads exact sizes, U. S. S. and Whitworth threads furnished at same list prices.

For list prices on Tap Wrenches furnished with these assortments, see page 215.
For list prices on other parts, see page 51.

Little Giant.

FULL STOCKED SCREW PLATES.



Assortment No. 620.
Has Stock for each size Die. Adjustable Tap Wrench, **No. 7½.**
DIES AND TAPER TAPS.
Cutting $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8}, $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$ **$40.00**

Assortment No. 625.
Has Stock for each size Die. Adjustable Tap Wrench, **No. 8.**
DIES AND TAPER TAPS.
Cutting $\frac{7}{8}^{9}$, 1^{8}, $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$, $1\frac{3}{8}^{6}$, $1\frac{1}{2}^{6}$..... **$50.00**

Assortment No. 630.
Has Stock for each size Die. Adjustable Tap Wrench, **No. 8.**
DIES AND TAPER TAPS.
Cutting $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$, $1\frac{3}{8}^{6}$, $1\frac{1}{2}^{6}$ **$43.50**

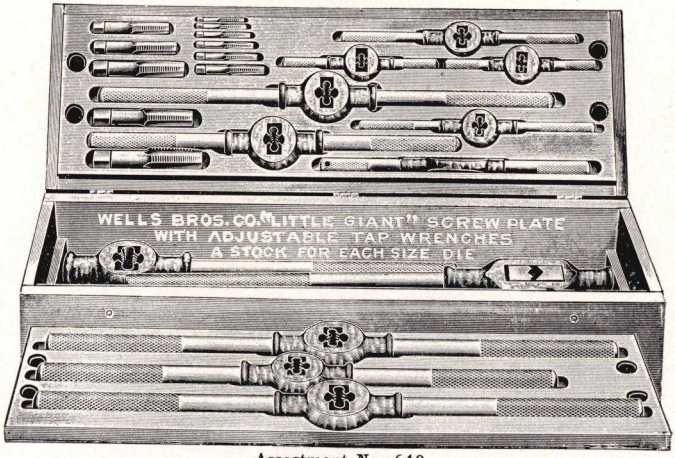
"V" threads oversize furnished unless otherwise ordered.

"V" Exact, U. S. S. and Whitworth threads furnished at same list prices.

For list prices on Tap Wrenches furnished with these assortments, see page 215.
For list prices on other parts, see page 51.

Little Giant.

FULL STOCKED SCREW PLATES.

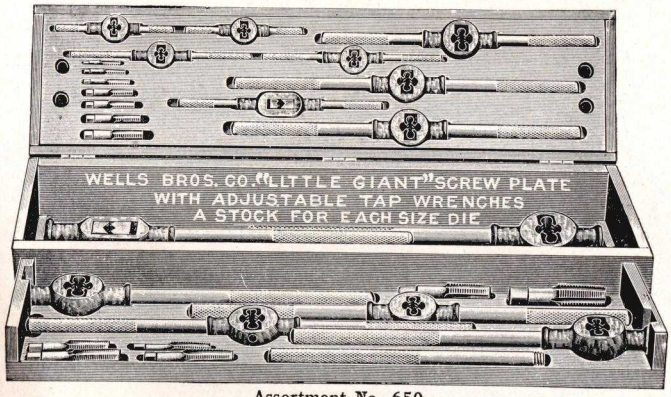


Assortment No. 640.

Has Stock for each size Die. Two Adjustable Tap Wrenches, **Nos. 6** and **7½**.

DIES AND TAPER TAPS.

Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8}, $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$, ... **$47.00**



Assortment No. 650.

Has Stock for each size Die. Two Adjustable Tap Wrenches, **Nos. 6** and **8**.

DIES AND TAPER TAPS.

Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8}, $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$, $1\frac{3}{8}^{6}$, $1\frac{1}{2}^{6}$ **$67.00**

"V" threads oversize furnished unless otherwise ordered.

"V" Exact, U. S. S. and Whitworth threads furnished at same list prices.

For list prices on Tap Wrenches furnished with these assortments, see page 215.

For list prices on other parts, see page 51.

FULL STOCKED SCREW PLATES.

LIST OF ASSORTMENTS AND PRICES.

Asst. No. 61. Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$ $12 00

Asst. No. 62 Cutting $\frac{1}{4}^{20}$, $\frac{3}{8}^{16}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$ 15.50

Asst. No. 63 Cutting $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8} 17.00

Asst. No. 64 Cutting $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8} 19.50

Asst. No. 65 Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$ 18.00

Asst. No. 65½ Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{9}{16}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$ 20.50

Asst. No. 66 Cutting $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8} 24.00

Asst. No. 67 Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8} 29.50

Asst. No. 67½ Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{9}{16}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8} 32.00

Asst. No. 620 Cutting $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8}, $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$ 40.00

Asst. No. 625 Cutting $\frac{7}{8}^{9}$, 1^{8}, $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$, $1\frac{3}{8}^{6}$, $1\frac{1}{2}^{6}$ 50.00

Asst. No. 630 Cutting $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$, $1\frac{3}{8}^{6}$, $1\frac{1}{2}^{6}$ 43.50

Asst. No. 640 Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8}, $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$ 47.00

Asst. No. 650 Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8}, $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$ 67.00

For Screw Plates cutting to 2 inches, see pages 53 to 55.

"V" threads oversize furnished unless otherwise ordered.

"V" threads exact sizes, U. S. S. and Whitworth threads furnished at same list prices.

For list prices on Tap Wrenches furnished with these assortments, see page 215.

For list prices on other parts, see page 51.

Little Giant.

FULL STOCKED SCREW PLATES.

PRICE LIST.

PARTS OF SCREW PLATES PAGES 42 to 50.

Size	Die.	Guide.	Stock.	Tap.	Size.	Die	Guide.	Stock.	Tap.
3/16	$1.00	$0.20	$0.50	$0.35	3/4	$2.00	$0.20	$0.75	$1.20
1/4	1.00	.20	.50	.45	13/16	2.00	.20	1.00	1.40
5/16	1.00	.20	.50	.50	7/8	2.75	.20	1.00	1.60
3/8	1.25	.20	.50	.55	15/16	2.75	.20	1.00	1.80
7/16	1.25	.20	.75	.60	1	2.75	.20	1.00	2.00
1/2	1.50	.20	.75	.70	1 1/8	4.00	.50	1.75	2.25
9/16	1.50	.20	.75	.80	1 1/4	4.00	.50	1.75	2.60
5/8	1.75	.20	.75	.90	1 3/8	5.00	.50	2.25	3.00
11/16	1.75	.20	.75	1.05	1 1/2	5.00	.50	2.25	3.50

Left hand Taps and Dies of regular threads furnished at regular prices. See hand Tap Lists page 102.

For prices on Tap Wrenches, see page 215.

LEFT-HAND THREADS are furnished at above list prices. Particular attention is called to the guide; this, being removable, can be replaced at a very low cost, and save the expense of purchasing an entire new stock.

The principle of the die and stock is the same as used in our single stock plate, see pages 10 and 11.

To adjust, simply turn screws in or out, as the adjustment desired requires.

Little Giant.

SCREW PLATES.

Containing besides the Regular Assortments of Stocks, Dies, Collets and Taps, an assortment of Straight Shanked Twist Drills of the correct size to be used with the Taps put up in the assortment of the following Sets.

LIST OF ASSORTMENTS AND PRICES.

Assortment No. M1.

Has Stock 7½ inches long. Adjustable Tap Wrench No. 0.

TAPS, DIES, COLLETS AND TWIST DRILLS.

Price.

Cutting $\frac{1}{8}^{40}$, $\frac{5}{32}^{32}$, $\frac{3}{16}^{24}$, $\frac{7}{32}^{24}$, $\frac{1}{4}^{20}$ **$7.25**

Assortment No. M2.

Has Stock 7½ inches long. Adjustable Tap Wrench, No. **0.**

TAPS, DIES COLLETS AND TWIST DRILLS.

Cutting $\frac{7}{64}^{56}$, $\frac{1}{8}^{40}$, $\frac{9}{64}^{40}$, $\frac{5}{32}^{32}$, $\frac{3}{16}^{24}$, $\frac{7}{32}^{24}$, $\frac{1}{4}^{20}$ **$9.00**

Assortment No. M3.

Has Stock 7½ inches long. Adjustable Tap Wrench, No. **0.**

TAPS, DIES, COLLETS AND TWIST DRILLS.

Cutting $\frac{7}{64}^{56}$, $\frac{1}{8}^{40}$, $\frac{9}{64}^{40}$, $\frac{5}{32}^{32}$, $\frac{11}{64}^{32}$, $\frac{3}{16}^{24}$, $\frac{13}{64}^{24}$, $\frac{7}{32}^{24}$, $\frac{15}{64}^{24}$, $\frac{1}{4}^{20}$ **$12.00**

Collets on all above assortments, 1¼ diameter.

Other Assortments furnished if desired. Prices quoted on application.

It is important that Sizes and Number of Threads of each Assortment are given in order sent us. Unless given we must use our judgment as to what we shall send.

For prices on parts, see page 19.

Little Giant.

PUMP MAKERS' STOCKS AND DIES.

The dies in these stocks are the regular "Little Giant" Adjustable die and the single stocks are put up in the same way as the full stocked screw plates. The dies in the double stock are held in place by a wedge instead of a guide.

This wedge has beveled sides fitting on the bevel of the dies in the same way as the bevel of the collet cap fits the bevel of the die.

As the wedge is tightened the dies are held rigidly in place insuring the same solidity that is secured by the guide forcing the die into the cap.

No. 250 Double Stock with two dies, both adjusted and ready for use, $\frac{3}{8}^{14}$, $\frac{7}{16}^{12}$ **$3.35**

No. 251 Single Stock with one die $\frac{3}{8}^{14}$ **1.80**

No. 252 Single Stock with one die, $\frac{7}{16}^{12}$ **1.85**

No. 253 Single Stock, with one die, $\frac{1}{2}^{12}$ **2.20**

PRICES OF PARTS.

Stock No. 250, Double **$0.85**

Stock No. 251, Single $\frac{3}{8}$ ..... **.55**

Stock No. 252, Single $\frac{7}{16}$ ..... **.60**

Stock No. 253, Single $\frac{1}{2}$ ..... **.70**

$\frac{3}{8}^{14}$ die **1.25**

$\frac{7}{16}^{12}$ die **1.25**

$\frac{1}{2}^{12}$ die **1.50**

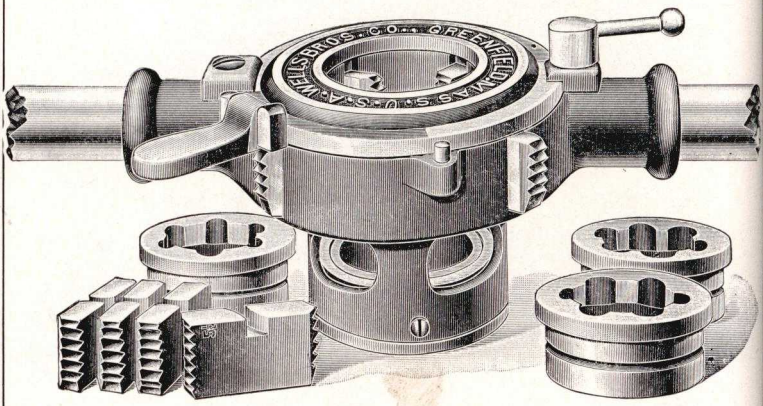
Guides $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$ ..... each **.20**

Wedge for Double Stock ..... **.15**

Above dies are all sent "V" thread $\frac{1}{32}$ oversize unless otherwise ordered.

SCREW PLATES.

A STRONG, PRACTICAL DIE FOR SIZES 1⅝, 1¾, 1⅞ INCHES.



The demand for a Screw Plate cutting larger sizes than 1½″ has made it necessary for us to make up a die which will properly thread to 2 inches.

It has always been our custom when taking up such a matter as this to give our customers the benefit of our experience.

The die shown above is one on which we have spent ample time and we offer it with the assurance that it will give entire satisfaction.

For description of tools and prices, see page 55.

PRICE LIST OF PARTS.

Set of Dies cutting 1⅝ and 1⅞	$4.00
Set of Dies " 1¾ and 2	4.00
Guides each size	1.00
Taper Tap 1⅝	4.20
" " 1¾	5.00
" " 1⅞	5.80
" " 2	6.70
Stock	20.00

Little Giant.

SCREW PLATES.

FOR SIZES 1⅝″, 1¾″, 1⅞″ and 2″.

The assortments listed below are put up with the style die shown on opposite page.

They are quick releasing. It is not necessary to turn back over the finished threads.

The dies are held firmly in place and to all working purposes are as solid as a solid die, insuring perfect threads.

This stock is of the same principle as the Opening Die Pipe Stock shown on page 70.

PRICE LIST OF ASSORTMENTS.

55

Assortment No. 55.

Has Stock with two sets of Dies (each set cuts two sizes) and Taper Taps, cutting 1⅝, 1¾, 1⅞, 2 ..... **$45.00**

Assortment No. 57.

Has Stock with one set of Dies, and Taper Taps, cutting 1⅝, 1⅞ **$33.00**

Assortment No. 59.

Has Stock with one set of Dies, and Taper Taps, cutting 1¾, 2 ..... **$32.00**

If TAP WRENCH is wanted for 1⅝ inch and larger add to list price of Assortment **$15.00**

For prices on Assortments, cutting 1½ inches and smaller, see pages 9 to 51.

DIES are threaded on both ends 1⅝ and 1⅞ sizes on one set—1¾″ and 2″ on one set.

Little Giant

SINGLE STOCKED SCREW PLATES.

FOR BRAZED BRASS TUBING.

This shows an assortment, with Taps and Tap Wrench.

Assortment No. 14.

Stock 14½″ long. Dies and Collets 2″ diameter.
Without Taps or Tap Wrench.

Cutting ¼, 5/16, ⅜, 7/16, ½, ... **$10.50**

Assortment No. 15.

Stock 14½″ long. Adjustable Tap Wrench, **No. 5.**
Plug Taps, Dies, Collets 2″ diameter.

Cutting ¼, 5/16, ⅜, 7/16, ½, ... **$12.00**

Assortment No. 16.

Stock 23″ long. Dies and Collets 2¾″ diameter.
Without Taps or Tap Wrenches.

Cutting ¼, 5/16, ⅜, 7/16, ½, ⅝, ¾, ... **$13.00**

Assortment No. 17.

Stock 23″ long. Adjustable Tap Wrenches, **No. 6.**
Plug Taps, Dies, Collets 2¾″ diameter.

Cutting ¼, 5/16, ⅜, 7/16, ½, ⅝, ¾, ... **$16.00**

Assortment No. 18.

Stock 26″ long. Dies and Collets 2¾″ diameter.
Without Taps or Tap Wrenches.

Cutting ¼, 5/16, ⅜, 7/16, ½, ⅝, ¾, ⅞, 1, ... **$21.00**

Assortment No. 19.

Stock 26″ long. Two Adjustable Tap Wrenches, **Nos. 5 and 7.**
Plug Taps, Dies, Collets, 2¾″ diameter.

Cutting ¼, 5/16, ⅜, 7/16, ½, ⅝, ¾, ⅞, 1, ... **$25.50**

We supply the above sets in both American (27 threads per inch) Standard and English (26 threads per inch) Standard.

These Taps and Dies cut straight not tapering threads. The tubing on which they are used is measured at actual size or outside diameter—not pipe sizes.

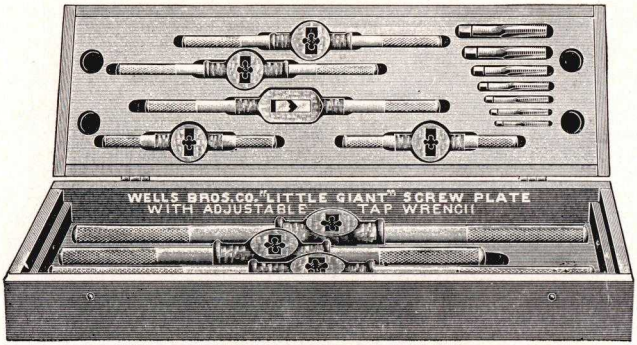
For list prices on Tap Wrenches furnished with these assortments, see page 215.

For list prices on other parts, see pages 30, 31, 133.

Little Giant.

FULL STOCKED SCREW PLATES.

FOR BRAZED BRASS TUBING.



Assortment No. 614.
Has Stock for each size die.
Without Taps or Tap Wrenches.
Cutting $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, ... **$10.50**

Assortment No. 615.
Has Stock for each size die. Adjustable Tap Wrench, **No. 5.**
DIES AND PLUG TAPS.
Cutting $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, ... **$12.00**

Assortment No. 616.
Has Stock for each size dies.
With dies but Without Taps or Tap Wrench.
Cutting $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, ... **$15.00**

Assortment No. 617.
Has Stock for each size die. Adjustable Tap Wrench, **No. 6.**
DIES AND PLUG TAPS.
Cutting $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, ... **$18.00**

Assortment No. 618.
Has Stock for each size die.
With Dies, but Without Taps or Tap Wrenches.
Cutting $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1, ... **$25.00**

Assortment No. 619.
Has Stock for each size die. Adjustable Tap Wrench, **Nos. 5** and **7.**
DIES AND PLUG TAPS
Cutting $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1, ... **$29.50**

We supply the above sets in both American (27 threads per inch) Standard, and English (26 threads per inch) Standard.

These Taps and Dies cut straight, not tapering threads. The tubing in which they are used is measured at its actual size or outside diameter—not pipe size.

For list prices on Tap Wrenches furnished with these assortments, see page 215.

For list prices on other parts, see pages 51, 133.

NOTICE.

"V" THREADS OVERSIZE WILL BE SENT UNLESS OTHERWISE ORDERED.

In our catalog, 1903, we advised that U. S. Standard form and pitch of thread would be furnished as regular unless otherwise specified.

We assumed that our customers would prefer this form of thread. Our experience, however, is to the contrary.

Owing to the demands made on us for "V" form and rough iron sizes, we have concluded to hereafter furnish these as regular. Our customers will understand, however, that *"V" exact, United States Standard* and *Whitworth forms of thread, both in Dies and Taps, are furnished if desired, and so specified at regular list prices.*

It is important where goods are wanted of any form *not* listed as regular, that their orders should plainly specify the form and pitch of thread.

SECTION II.

Pages 59 to 74.

SCREW PLATES FOR PIPE.

Adjustable Die Pipe Plates.

Adjustable Die Pipe Plates, with Bushing Guides.

Full Stocked Pipe Plates.

Opening Die Pipe Plates.

Double and Triple Die Stocks.

SCREW PLATES FOR PIPE.

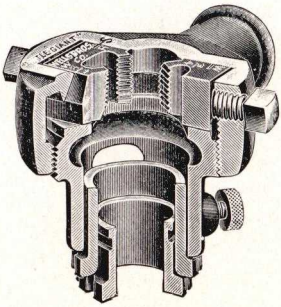
Our "Little Giant" Pipe Die is made up on the same principle as our "Little Giant" Bolt Cutting die illustrated on page 10. However, we give below a cut of die as used in our pipe plate.

You will notice the die is beveled. This bevel fits into the bevel on the stock and the guide or nut holds it in place. On account of this bevel and the bevel on the stock it makes the die as solid as a solid die.

This you will see has all the advantages of a solid die and still others for it is adjustable to overcome differences in fittings, also wear, or to make a tight or loose fit.

They can be easily sharpened.

The handles as in our plates are of pipe and knurled so as to prevent slipping.



Little Giant.

SCREW PLATES.

FOR PIPE.

A SOLID DIE, YET ADJUSTABLE.

The guides are interchangeable throughout the set, for convenience in cutting nipples.

Sure to cut the thread straight. The dies can be re-sharpened.

Dies are adjustable to overcome variation of fittings or pipe.

Dies and guides can be changed quickly.

It is light, yet strong and durable.

Dies are held by bevel. No screws to break or get out of order.

NO. 1 *PLATE.

	Price.
Cutting ¼, ⅜, ½, ¾, 1	**$9.00**
Price of Stock, when sold alone	**2.00**
" " Dies, " " "	**1.25**
" " Guides, " " " each size	**.50**

No. 2 *PLATE.

Cutting 1¼, 1½, 2	**$15.00**
Price of Stock, when sold alone	**5.25**
" " Dies, " " "	**3.00**
" " Guides, " " "	**.75**

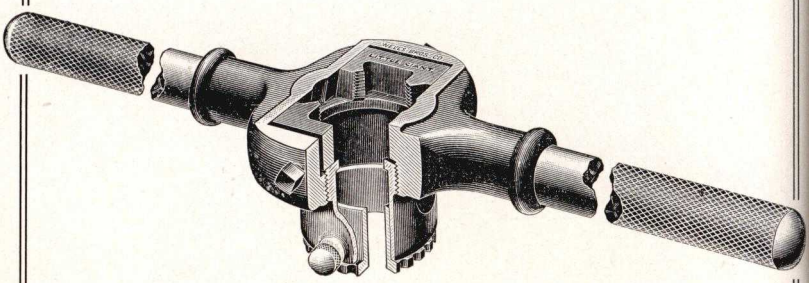
This plate is packed same as shown above.

L. H. DIES furnished at same prices.

PLATES cutting English PIPE THREADS furnished at same list prices.

***When ordering Plates as above state "As on page 61." We have other Pipe Plates Nos. 1 and 2 and do not wish to get them confused.**

BUSHING GUIDE PIPE PLATES.



BUSHING GUIDE PIPE STOCKS AND DIES.

The above is a sectional view of our Improved Bushing Guide Pipe Plate. They were first illustrated in our catalog of 1903 and by this time have become widely known.

DIES. These plates are furnished with the Little Giant Adjustable die which has made our BOLT threading tools so well known.

ADJUSTABILITY. Perfect fits (tight or loose) can be had. Dies are adjustable to overcome variations in fittings. Can be resharpened.

STOCKS. Stocks are made of a variety of lengths so as to give sufficient leverage for work required.

HANDLES. Handles of stocks are of pipe and knurled so as to prevent slipping. The Pipe Handles give lightness to the plate.

We list on the next pages a varied assortment of Plates which we think will cover all requirements.

Little Giant.

BUSHING GUIDE PIPE PLATES.

LIST OF ASSORTMENTS AND PRICES.

Assortment No. 0.

Has Stock 26 inches long, R. H. Dies only. Price

Cutting 1/8, 1/4, 3/8, 1/2 ..... **$5.00**

Assortment No. 0A.

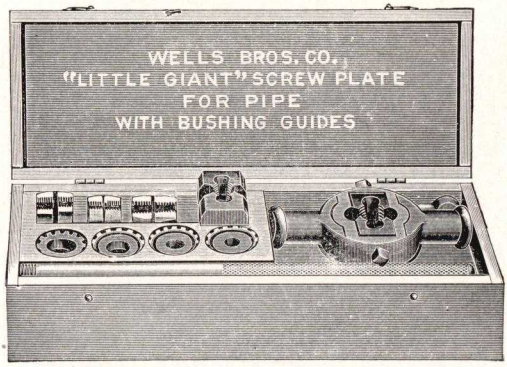
Has Stock 26 inches long, R. and L. H Dies only.

Cutting 1/8, 1/4, 3/8, 1/2 ..... **8.50**

Assortment No. 0B.

Has Stock 26 inches long, R. H. Dies and Taps.

Cutting 1/8, 1/4, 3/8, 1/2 ..... **7.75**



Assortment No. 1.*

Has Stock 36 inches long, R. H. Dies only.

Cutting 1/4, 3/8, 1/2, 3/4, 1 inch **$8.00**

Assortment No. 1C.

Has Stock 36 inches long, R. and L. H. Dies only.

Cutting 1/4, 3/8, 1/2 3/4, 1 inch **12.50**

Assortment No. 1D.

Has Stock 36 inches long, R. H. Dies and Taps.

Cutting 1/4, 3/8, 1/2, 3/4, 1 inch **13.00**

For prices on extra sizes, etc., see page 66.

***When ordering above Plates state BUSHING GUIDES, as we have other Pipe Plates Nos. 1 and 2.**

Little Giant.

BUSHING GUIDE PIPE PLATES.

Assortment No. 1½.

Has Stock 41 inches long, R. H. Dies only.

Cutting ¾, 1, 1¼ inch **$8.50**

Assortment No. 1½E.

Has Stock 41 inches long, R. and L. H. Dies only.

Cutting ¾, 1, 1¼ inch **13.00**

Assortment No. 1½F.

Has Stock 41 inches long, R. H. Dies and Taps.

Cutting ¾, 1, 1¼ inch **13.50**

Assortment No. 2*.

Has Stock 52 inches long, R. H. Dies only.

Cutting 1¼, 1½, 2 inch **14.00**

Assortment No. 2G.

Has Stock 52 inches long, R. and L. H. Dies only.

Cutting 1¼, 1½, 2 inch **21.00**

Assortment No. 2H.

Has Stock 52 inches long, R. H. Dies and Taps.

Cutting 1¼, 1½, 2 inch **21.50**

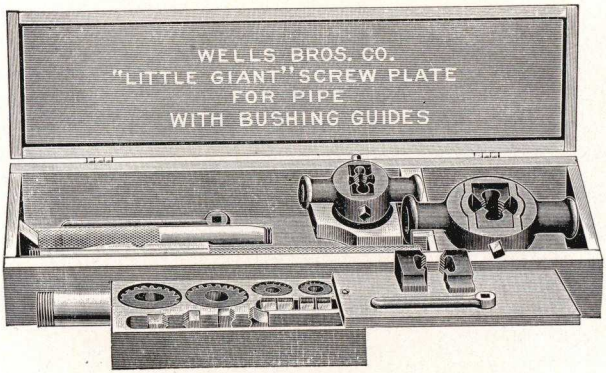
When ordering DIES, BUSHINGS, or STOCKS, we MUST know the assortment number of plate they are for.

For price list of parts see page 66,

***When ordering above Plates, say "BUSHING GUIDES," as we have other Pipe Plates Nos. 1 and 2.**

Little Giant.

BUSHING GUIDE PIPE PLATES.



LIST OF ASSORTMENTS AND PRICES.

Assortment No. 3.

Has Stocks 26 and 41 inches long, R. H. Dies only. Price.

Cutting ¼, ⅜, ½, ¾ 1, 1¼ inch..... **$14.00**

Assortment No. 3I.

Has Stocks 26 and 41 inches long, R. and L. H. Dies only

Cutting ¼, ⅜, ½, ¾, 1, 1¼, inch **22.50**

Assortment No. 3J.

Has Stocks 26 and 41 inches long, R. H. Dies and Taps.

Cutting ¼, ⅜, ½, ¾, 1, 1¼ inch **21.50**

Assortment No. 4.

Has Stocks 36 and 52 inches long, R. H. Dies only.

Cutting ¼, ⅜, ½, ¾, 1, 1¼, 1½, 2 inch..... **22.00**

Assortment No. 4K.

Has Stocks 36 and 52 inches long, R. and L. H. Dies only.

Cutting ¼ ⅜, ½, ¾, 1, 1¼, 1½, 2 inch..... **33.50**

Assortment No. 4L.

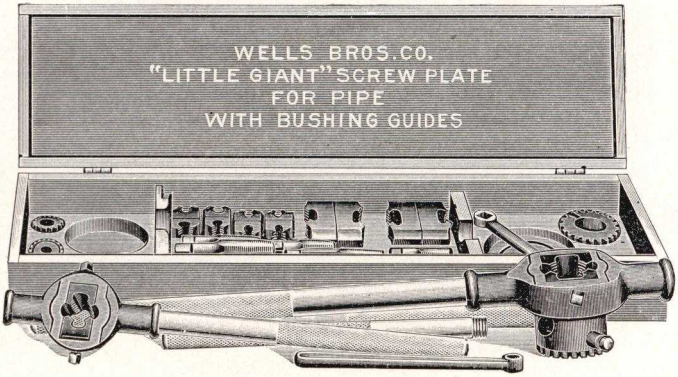
Has Stocks 36 and 52 inches long, R. H. Dies and Taps.

Cutting ¼, ⅜, ½, ¾, 1, 1¼, 1½, 2 inch..... **34.50**

For price list of parts see page 66.

Little Giant.

BUSHING GUIDE PIPE PLATES.



Assortment No. 5.

Has Stock 36 inches long, R. H. Dies only.

Cutting ½, ¾, 1 inch **$6.50**

Assortment No. 5M.

Has Stock 36 inches long, R. and L. H. Dies only.

Cutting ½, ¾, 1 inch **9.50**

Assortment No. 5N.

Has Stock 36 inches long, R. H. Dies and Taps.

Cutting ½, ¾, 1 inch **10.50**

ALL PLATES are listed with TAPER TAPS, and unless ordered to the contrary will be so shipped.

LIST PRICES OF PARTS.

BUSHING GUIDE PIPE PLATES.

	Dies.	Bushings.	Stocks.
No. 0	$1.00	$0.25	$1.00
No. 1	1.25	.35	2.00
No. 1½	2.00	.45	3.50
No. 2	3.00	.60	5.00

When ordering parts we MUST know the assortment number of the plate they are for.

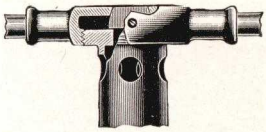
For price of Taps see page 136.

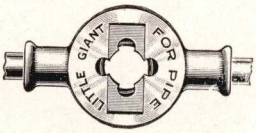
Little Giant.

FULL STOCKED SCREW PLATES.

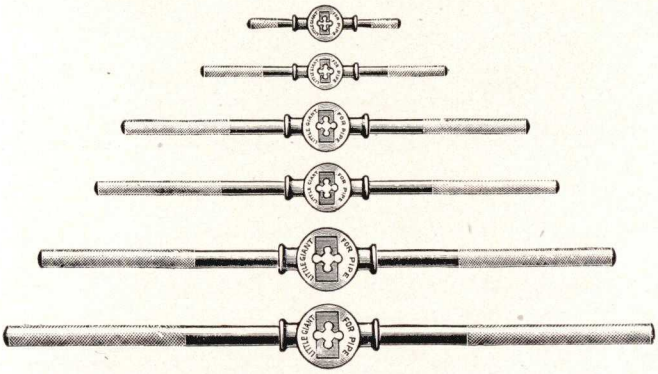
FOR PIPE.

A STOCK, DIE AND GUIDE, COMPLETE.





Sectional View of Stock, Die and Guide, showing adjustment.



LIST OF SIZES, LENGTHS, AND PRICES
OF COMPLETE SETS.

									Price.
No.	80	for	1/8	inch	pipe.	Length of stock	9	inches	$1.75
"	81,	"	1/4	"	"	" "	13½	"	1.75
"	82,	"	3/8	"	"	" "	23	"	2.00
"	83,	"	1/2	"	"	" "	26	"	2.00
"	84,	"	3/4	"	"	" "	32	"	3.00
"	85,	"	1	"	"	" "	36	"	3.00
"	86,	"	1¼	"	"	" "	41	"	4.50
"	87,	"	1½	"	"	" "	46	"	5 50
"	88	"	2	"	"	" "	52	"	7.25

When ordering, give number and size.
RIGHT-HAND DIES will always be sent, unless otherwise ordered.
LEFT-HAND DIES same price.
For price list of parts, see page 69.
For prices on these stocks put up in sets, see page 68.

FULL STOCKED ADJUSTABLE PIPE PLATES.

LIST OF ASSORTMENTS AND PRICES.

		Price.
No. P1.	Stocks and Dies, for cutting ⅛, ¼, ⅜, ½	**$8.00**
No. P2.	Stocks and Dies, for cutting ¼, ⅜, ½, ¾, 1	**11.50**
No. P3.	Stocks and Dies, for cutting ¼, ⅜, ½, ¾, 1, 1¼	**16.00**
No. P4.	Stocks and Dies, for cutting ¼, ⅜, ½, ¾, 1, 1¼, 1½, 2,	**28.50**

For price of parts, see page 69.

For price of single stocks, dies and guides, see page 67.

The above assortments are put up in nice wood cases, making a convenient arrangement to keep tools in good shape for immediate use. The fact that each die has an independent stock does away with the necessity of adjustment each time die is used.

These sets are capable of a large variety of work.

Little Giant.

SCREW PLATES.

FOR PIPE.

This style of stock and die for pipe can but recommend itself to all users of this class of tools.

Each die is furnished with a stock and guide, independent of the other sizes, of suitable length and weight. In this way the annoyance of removing dies and adjustment to size is done away with, as every die is in place and true to size, requiring no adjustment except only when the irregularity or variations in the fittings make it necessary.

Dies are made upon the same principle as those used in our celebrated "Little Giant" Screw Plates for bolts.

These stocks, dies, and guides are sold separately or in sets as shown on pages 67 and 68.

PRICE LIST OF PARTS.

FULL STOCKED PIPE PLATES.

Size	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
Dies	$1.00	$1.00	$1.00	$1.00	$1.25	$1.25	$2.00	$3.00	$3.00
Guides	.25	.25	.25	.25	.50	.50	.75	.75	.75
Stocks	.50	.50	.75	.75	1.25	1.25	1.75	2.25	3.50

For price list of complete sets see opposite page.

For price list of single stocks see page 67.

LEFT-HAND DIES will fit stocks used for right-hand dies and are sold at above list prices.

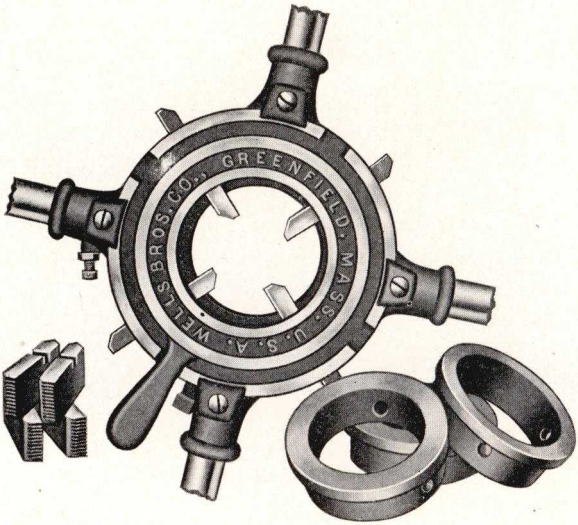
RIGHT-HAND DIES always sent, unless otherwise ordered.

ENGLISH PIPE THREADS furnished at same prices.

Little Giant.

OPENING DIE PIPE PLATES.

FOR SIZES 2½ TO 4 INCHES INCLUSIVE.



WE list for the first time an opening die Pipe Stock.

This is a new departure but one which we are sure will be highly appreciated.

The dies are arranged so that when the thread on pipe has been cut they can be released and the stock drawn off the pipe.

This opening device saves the time necessary to turn the stock off the material being threaded.

Each cutting edge of the die is a separate piece and is easily sharpened by grinding the face.

They have plenty of relief, making them very easy cutting.

Full finished threads are made at one cut. They do not require going over a second time.

OPENING DIE PIPE PLATES.

FOR SIZES 2½ TO 4 INCHES INCLUSIVE.

LIST OF ASSORTMENTS.

Assortment No. 90.

Cutting 2½ and 3 inch **$51.50**

Assortment No. 91.

Cutting 3½ and 4 inch **$51.50**

Assortment No. 92.

Cutting 2½, 3, 3½ and 4 inches **$55.00**

PRICE OF PARTS.

Dies per set of 4 pieces	**$4.00**
Bushings	**1.00**

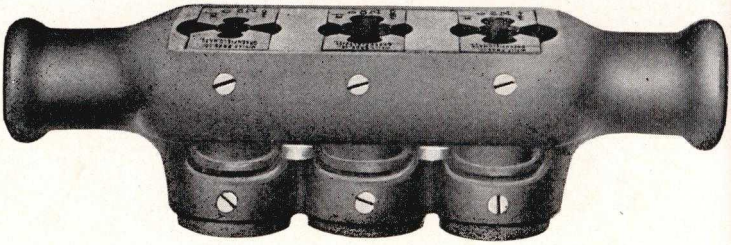
Unless otherwise ordered RIGHT HAND threads will always be sent.

Left hand furnished at same prices.

BRIGGS STANDARD thread furnished unless otherwise ordered.

Whitworth threads furnished at same prices.

SCREW PLATES FOR PIPE.



DOUBLE AND TRIPLE PIPE DIE STOCKS.

OUR "Little Giant" die arranged for threading pipe has become so widely popular that we have enlarged our line and now illustrate Double and Triple Die Stocks.

These are stocks made up in the same style as our Bushing Pipe Plates, but having places in the stock for two or three dies. In other words it is a Full Stocked Pipe Plate cutting two or three different sizes, but having only one stock.

This style has the advantage of both the other style Pipe Plates. That is—it has the advantage of only having to carry about a single stock for different sizes and it also has the advantage of not having to change the dies each time a different size is to be used.

It is possible with this style to have a plate of seven or eight different sizes in two or three stocks, each of which is ready for instant use.

We are listing this style in several sizes giving combinations most used by steam and gas fitters.

SCREW PLATES FOR PIPE.

DOUBLE AND TRIPLE PIPE DIE STOCK.

We list below assortments of those sizes which we think our customers will find most serviceable.

By combining two or more stocks a much greater variety of assortments may be obtained, which at the same time will give the minimum amount of weight and take up the minimum amount of space.

The sets will be found extremely convenient for the use of plumbers as well as others.

PRICE LIST OF ASSORTMENTS.

Asst. No. 200	Cutting ⅛, ¼, ⅜	**$4.25**
Asst. No. 201	Cutting ¼, ⅜, ½	**4.25**
Asst. No. 210	Cutting ⅜, ½, ¾	**6.00**
Asst. No. 211	Cutting ½, ¾, 1	**6.00**
Asst. No. 220	Cutting ½, ¾	**4.50**
Asst. No. 221	Cutting ¾, 1	**4.50**
Asst. No. 230	Cutting 1, 1¼	**7.25**
Asst. No. 240	Cutting 1¼, 1½	**10.50**
Asst. No. 241	Cutting 1½, 2	**10.50**

For price list of parts see page 74.

Right hand dies always sent unless otherwise ordered.

Left hand dies furnished at same list prices.

Little Giant.

SCREW PLATES FOR PIPE.

DOUBLE AND TRIPLE PIPE DIE STOCKS.

PRICE OF PARTS.

Number.	Stocks.	Dies.	Guides.	Wedge.
200	$1 .00	$1 .00	$0 .25	$0 .15
201	1 .00	1 .00	.25	.15
210	2 .00	1 .25	.35	.20
211	2 .00	1 .25	.35	.20
220	2 .00	1 .25	.35	.20
221	2 .00	1 .25	.35	.20
230	3 .50	2 .00	.45	.25
240	5 .00	3 .00	.60	.45
241	5 .00	3 .00	.60	.45

When Stocks are ordered separately Wedges and Guides will always be sent unless otherwise ordered.

SECTION III.

PAGES 75 TO 82.

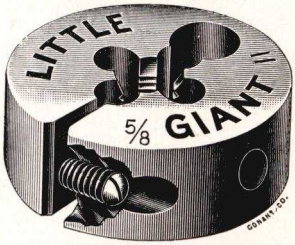
SPLIT DIE SCREW PLATES.

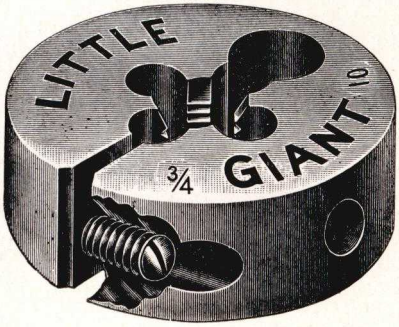
B. ASSORTMENTS WITH $\frac{5}{8}''$ DIAM. DIES.

D. ASSORTMENTS WITH $\frac{13}{16}''$ DIAM. DIES.

F. ASSORTMENTS WITH $1''$ DIAM. DIES.

Little Giant.





SPLIT DIES AND ADJUSTABLE SPLIT DIE SCREW PLATES.

Our Adjustable Split Die is made of the best material and in such a way as to give the best results.

They are adjustable to either a smaller or larger size to overcome wear, by turning the small adjusting screw either in or out.

The succeeding pages give a complete list of the large variety of SIZES and THREADS, as well as the great variety of ASSORTMENTS, which we are now prepared to furnish in these ADJUSTABLE ROUND SPLIT DIES.

The ASSORTMENTS given are what we put up as regular, but understand that we will furnish any SIZE and THREAD given in list of parts you may desire, in place of these, at same list price of complete assortments.

THESE ASSORTMENTS ARE FURNISHED IN NEAT CASES, WITH PLUSH LINED TOPS, making them very handsome. EACH ASSORTMENT has ADJUSTABLE TAP WRENCH. Length of Stock, 6 in.

Unless Numbers and Sizes, with the Threads desired, are indicated, PLATES will be sent as listed.

For List Prices of Adjustable Split Dies of diameters used in these plates, also other diameters, see pages 88-91.

Little Giant.

SPLIT DIE SCREW PLATES.

BICYCLE PLATES.

ROUND ADJUSTABLE DIES 5/8 INCH DIAMETER.

PRICE LIST OF REGULAR ASSORTMENTS.

No. B6 Cutting 6^{32}, $\frac{1}{8}^{40}$, $\frac{1}{8}^{48}$, 3^{48}, 3^{40}, 3^{56} **$5.00**
6 Taps, 6 Dies, Stock 5″ long. No. 1 Tap Wrench.

No. BB6 Cutting $\frac{9}{64}^{40}$, $\frac{3}{32}^{56}$, $\frac{7}{64}^{56}$, 2^{48}, $1\frac{1}{2}^{56}$, 1^{64} **5.00**
6 Taps, 6 Dies, Stock 5″ long. No. 1 Tap Wrench

No. B16 Cutting 1^{64}, $1\frac{1}{2}^{56}$, 2^{56}, 3^{48}, 4^{36}, 6^{32} **5.00**
6 Taps, 6 Dies, Stock 5″ long. No. 1 Tap Wrench.

No. B26 Cutting 1^{64}, $1\frac{1}{2}^{56}$, 2^{56}, 4^{36}, 6^{32}, 8^{32} **5.00**
6 Taps, 6 Dies, Stock 5″ long. No. 1 Tap Wrench.

No. B7 Cutting $\frac{1}{16}^{72}$, $\frac{3}{32}^{56}$, $\frac{1}{8}^{40}$, $\frac{5}{32}^{32}$, $\frac{3}{16}^{24}$
$\frac{7}{32}^{24}$, $\frac{1}{4}^{20}$ **6.00**
7 Taps, 7 Dies, Stock 5″ long. No. 1 Tap Wrench.

No. B14 Cutting $\frac{3}{32}^{50}$, $\frac{3}{32}^{54}$, $\frac{3}{32}^{56}$, $\frac{7}{64}^{56}$, $\frac{1}{8}^{40}$, $\frac{1}{8}^{48}$
$\frac{9}{64}^{40}$, 1^{64}, $1\frac{1}{2}^{56}$, 2^{48}, 3^{48}, 3^{56}, 4^{42}, 6^{38} **10.00**
14 Taps, 14 Dies, Stock 5″ long. No. 1 Tap Wrench.

THESE PLATES ARE FOR BICYCLE WORK.

The assortments given above are what we put up as regular, but understand that we will furnish any size and thread given in list of parts you may desire, in place of above, at same list price of complete assortment.

For prices on Dies used in above assortments, see page 88.

For prices on Stocks see page 82.

Little Giant.

SPLIT DIE SCREW PLATES.

ROUND ADJUSTABLE DIES, $\frac{13}{16}$ INCH DIAMETER.

The cut above shows one of our SCREW PLATES, having $\frac{13}{16}$ inch Diameter Dies. All of these PLATES contain an ADJUSTABLE TAP WRENCH, No. 2, which fits all sizes of taps, from the smallest to the largest, and is a much better wrench than a solid one.

PLATES having Adjustable Split Dies, whether $\frac{5}{8}$, $\frac{13}{16}$, or 1 inch diameter, are furnished with BRITISH ASSOCIATION and BIRMINGHAM (Stubbs) WIRE GAUGE SIZES if indicated in order, at same list prices as assortment having an equal number of sizes.

Length of Stock, 6 inches.

For price list of dies $\frac{13}{16}$ inch diameter showing regular sizes and threads, see page 89.

For price list of other parts see page 82.

Little Giant.

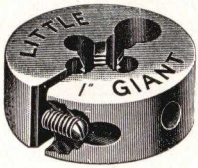
SPLIT DIE SCREW PLATES.

LIST OF ASSORTMENTS, $\frac{13}{16}$ INCH DIAMETER DIES.

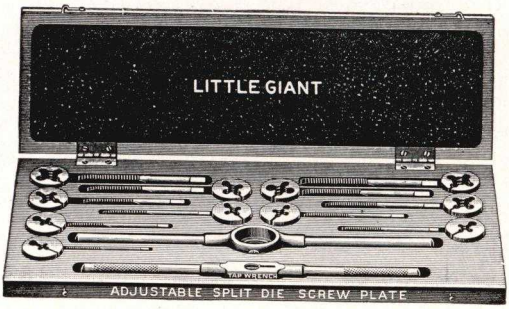
		Price
No. D5.	Cutting 4^{32}, 6^{32}, 8^{32}, 10^{24}, 12^{24}	**$5.00**
	5 Taps, 5 Dies, Stock and Adjustable Tap Wrench.	
No. DD5.	Cutting $\frac{1}{8}^{40}$, $\frac{5}{32}^{32}$, $\frac{3}{16}^{24}$, $\frac{7}{32}^{24}$, $\frac{1}{4}^{20}$	5.00
	5 Taps, 5 Dies, Stock and Adjustable Tap Wrench.	
No. D6.	Cutting 4^{36}, 6^{32}, 8^{32}, 10^{24}, 12^{24}, 14^{20}	5.75
	6 Taps, 6 Dies, Stock and Adjustable Tap Wrench.	
No. DD6.	Cutting $\frac{1}{8}^{40}$, $\frac{5}{32}^{32}$, $\frac{3}{16}^{24}$, $\frac{7}{32}^{24}$, $\frac{1}{4}^{20}$, $\frac{9}{32}^{20}$.....	5.75
	6 Taps, 6 Dies, Stock and Adjustable Tap Wrench.	
No. D7.	Cutting 4^{36}, 6^{32}, 8^{32}, 10^{24}, 12^{24}, 14^{20}, 16^{18}.....	6.50
	7 Taps, 7 Dies, Stock and Adjustable Tap Wrench.	
No. DD7.	Cutting $\frac{7}{64}^{56}$, $\frac{1}{8}^{40}$, $\frac{9}{64}^{40}$, $\frac{5}{32}^{32}$, $\frac{3}{16}^{24}$, $\frac{7}{32}^{24}$, $\frac{1}{4}^{20}$	6.50
	7 Taps, 7 Dies, Stock and Adjustable Tap Wrench.	
No. DD8.	Cutting $\frac{1}{16}^{72}$, $\frac{3}{32}^{56}$, $\frac{1}{8}^{40}$, $\frac{5}{32}^{32}$, $\frac{3}{16}^{24}$, $\frac{7}{32}^{24}$, $\frac{1}{4}^{20}$, $\frac{9}{32}^{20}$	7.25
	8 Taps, 8 Dies, Stock and Adjustable Tap Wrench.	
No. D10.	Cutting 2^{56}, 3^{48}, 4^{36}, 5^{32}, 6^{32}, 8^{32}, 10^{24}, 12^{24}, 14^{20}, 16^{18}.....	8.75
	10 Taps, 10 Dies, Stock and Adjustable Tap Wrench.	
No. D14.	Cutting 2^{56}, 4^{36}, 6^{32}, 8^{32}, 10^{24}, 12^{24}, 14^{20}, $\frac{7}{64}^{56}$, $\frac{1}{8}^{40}$, $\frac{9}{64}^{40}$, $\frac{5}{32}^{32}$, $\frac{3}{16}^{24}$, $\frac{7}{32}^{24}$, $\frac{1}{4}^{20}$	11.50
	14 Taps, 14 Dies, Stock and Adjustable Tap Wrench.	
No. D30.	Cutting $\frac{1}{16}$, $\frac{5}{64}$, $\frac{3}{32}$, $\frac{7}{64}$, $\frac{1}{8}$, $\frac{9}{64}$, $\frac{5}{32}$, $\frac{11}{64}$, $\frac{3}{16}$, $\frac{13}{64}$, $\frac{7}{32}$, $\frac{15}{64}$, $\frac{1}{4}$, $\frac{17}{64}$, $\frac{9}{32}$, and screw gauge sizes Nos. 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, ...	23.75
	30 Taps, 30 Dies, Stock and Adjustable Tap Wrench.	

Little Giant.

SPLIT DIE SCREW PLATES.



ROUND ADJUSTABLE DIES, 1 INCH DIAMETER.



The cut above shows one of our Screw Plates, having one inch Diameter Dies. All of these plates contain an Adjustable Tap Wrench No. 3, which fits all sizes of taps, from the smallest to the largest, and is a much better wrench than a solid one.

Plates having Adjustable Split Dies, Whether 5/8, 13/16, or 1 inch diameter, are furnished with British Association and Birmingham (Stubbs) Wire Gauge Sizes if indicated in order, at same list prices as assortment having an equal number of sizes.

Length of Stock, 9 inches.

SPLIT DIE SCREW PLATES.

LIST OF ASSORTMENTS, 1 INCH DIAMETER DIES.

Price.

No. F5. Cutting $\frac{3}{16}^{24}$, $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$ **$7.50**
Stock 9 inches long. 5 Dies, 5 Taps, and Adjustable Tap Wrench.

No. FF5. Cutting 12^{24}, 14^{20}, 16^{18}, 18^{18}, 20^{16} **7.50**
Stock 9 inches long. 5 Dies, 5 Taps, and Adjustable Tap Wrench.

No. F6. Cutting $\frac{1}{8}^{40}$, $\frac{3}{16}^{24}$, $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$ **8.00**
Stock 9 inches long. 6 Dies, 6 Taps, and Adjustable Tap Wrench.

No. FF6. Cutting 12^{24}, 14^{20}, 16^{18}, 18^{18}, 20^{16}, 24^{16} **8.00**
Stock 9 inches long. 6 Dies, 6 Taps, and Adjustable Tap Wrench.

No. F11. Cutting $\frac{1}{8}^{40}$, $\frac{5}{32}^{32}$, $\frac{3}{16}^{24}$, $\frac{7}{32}^{24}$, $\frac{1}{4}^{20}$, $\frac{9}{32}^{20}$,
$\frac{5}{16}^{18}$, $\frac{11}{32}^{18}$, $\frac{3}{8}^{16}$, $\frac{13}{32}^{16}$, $\frac{7}{16}^{14}$ **15.50**
Stock 9 inches long. 11 Dies, 11 Taps, and Adjustable Tap Wrench.

No. FF11. Cutting 4^{36}, 6^{32}, 8^{32}, 10^{24}, 12^{24}, 14^{20},
16^{18}, 18^{18}, 20^{16}, 22^{16}, 24^{16}, ... **15.50**
Stock 9 inches long. 11 Dies, 11 Taps, and Adjustable Tap Wrench.

No. F12. Cutting 12^{24}, 14^{20}, 16^{18}, 18^{18}, 20^{16}, 24^{16},
$\frac{1}{8}^{40}$, $\frac{3}{16}^{24}$, $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$ **16.00**

Stock 9 inches long. 12 Dies, 12 Taps, and Adjustable Tap Wrench.

Unless numbers and sizes, with the threads desired, are indicated, PLATES will be sent as listed above.

These assortments are put up in elegantly finished cases with velvet lining in cover.

The assortments given above are those regularly furnished by us, but we will furnish at the same prices assortments made up of any sizes or pitches given on page 90.

For list of dies 1″ diameter giving prices on all sizes and threads furnished at regular prices, see page 90.

SPLIT DIE SCREW PLATES.

LIST PRICES OF PARTS OF PLATES.

STOCKS.

							Price
No. B.	For $\frac{5}{8}$	Dies.	Whole length	5	inches	.....	**$0.50**
No. D.	" $\frac{13}{16}$	"	"	" 6	"	.....	**.75**
No. F.	" 1 in.	"	"	" 9	"	.....	**1.00**

We sell these stocks separate from the plates in large quantities. They will fit any make of dies of above diamter.

For Price List of Dies, see pages 88–91.

ADJUSTABLE TAP WRENCHES.

								Price
No. 1.	Holds Taps to	No. 14	or $\frac{13}{64}$	inclusive,	Length	5	in.	**$0.50**
No. 2.	" " " "	16	" $\frac{9}{32}$	"	"	$6\frac{3}{4}$	"	**.75**
No. 3.	" " " "	24	" $\frac{7}{16}$	"	"	$8\frac{1}{4}$	"	**1.00**

For Tap Wrenches for the larger sizes of Taps see page 81.

For price list of Taps see pages 100, 101 and 102.

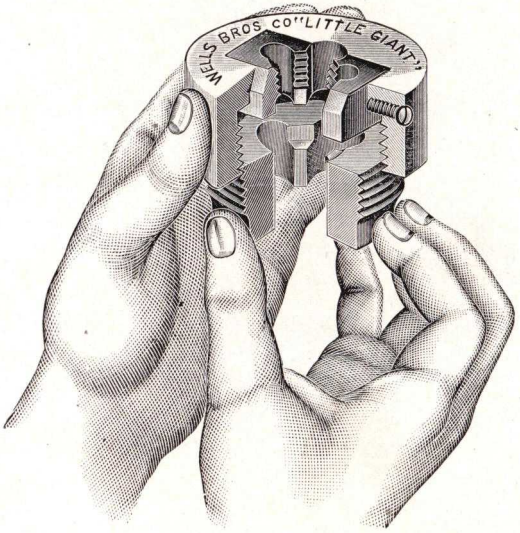
SECTION IV.

PAGES 83 TO 98.

DIES.

LITTLE GIANT ADJUSTABLE PLATE AND MACHINE.
BIT BRACE.
ADJUSTABLE ROUND SPLIT.
SOLID SQUARE BOLT.
SOLID BEVEL EDGE BOLT.
ADJUSTABLE BEVEL DIE WITH GUIDE IN SOLID SQUARE COLLET.
SOLID SQUARE PIPE.
SPRING SCREW.
SELF OPENING.

"LITTLE GIANT" ADJUSTABLE DIES.



A full description with sundry illustrations of this Die is given on pages 10 to 15.

THE "LITTLE GIANT" ADJUSTABLE DIE is used in our Screw Plates and also in our Bolt Cutters.

WE CALL YOUR PARTICULAR ATTENTION TO THE DESCRIPTIONS GIVEN.

For prices see opposite page.

Little Giant.

"LITTLE GIANT" PLATE AND MACHINE DIES

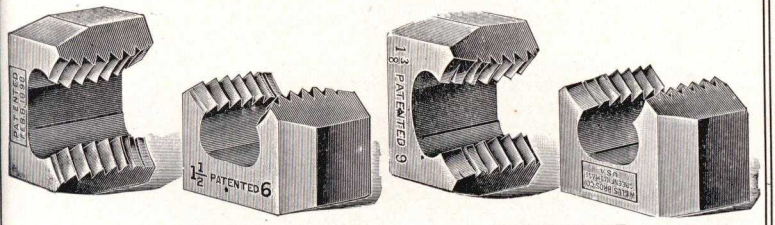


PLATE DIE MACHINE DIE

All orders will be filled with "V" Threads rough iron sizes unless otherwise specified. All sizes, and threads not listed will be considered special and subject to special prices.

Do not fail to state whether Plate or Machine Dies are wanted.

CONTINUED ON NEXT PAGE.

Standard Size	Rough Iron Size	United States Standard	"V" Standard	Whitworth Standard	"V" Threads also Furnished	Price Each
3/16		*32	24	*24	30, 32, 36	$1.00
	13/64	*32	24		32	1.00
	7/32	28	24	24	32	1.00
1/4		20	20	20	24, 27, 32	1.00
	17/64	20	20		24, 27, 32	1.00
	9/32	20	20		24, 27, 32	1.00
5/16		18	18	18	20, 24, 27, 32	1.00
	21/64	18	18		20, 24, 27, 32	1.00
	11/32	18	18		20, 24, 27, 32	1.00
3/8		16	16	16	14, 18, 20, 24. 27	1.25
	25/64	16	16		14, 18, 20, 24, 27	1.25
	13/32	16	16		14, 18, 20, 24, 27	1.25
7/16		14	14	14	12, 16, 20, 24, 27	1.25
	29/64	14	14		12, 16, 20, 24, 27	1.25
	15/32	14	14		12, 16, 20, 24, 27	1.25
1/2		*13	12	12	13, 14, 16, 20, 24, 27	1.50
	33/64	*13	12		13, 14, 16, 20, 24, 27	1.50
	17/32	*13	12		13, 14, 16, 20, 24, 27	1.50
9/16		12	12	12	14, 27	1.50
	37/64	12	12		14, 27	1.50
	19/32	12	12		14, 27	1.50

*We also furnish 3/16 and 13/64 inch Hand Taps at regular list and discount, with 24 threads to the inch, United States Standard form, and 3/16 inch Hand Taps with 32 threads to the inch, Whitworth Standard form.

*We also furnish at same list price and discount, in both even and rough iron sizes, 1/2-inch Nut Taps, 12 threads to the inch, United States Standard form.

Little Giant.

"LITTLE GIANT"

PLATE AND MACHINE DIES.

(Continued)

DIAMETER		NO. OF THREADS TO INCH				PRICE
Standard Size	Rough Iron Size	United States Standard	"V" Standard	Whitworth Standard	*"V" Threads also Furnished	Each
5/8		11	11	11	10, 12, 20, 24, 27	$1.75
	41/64	11	11		10, 12, 20, 24, 27	1.75
	21/32	11	11		10, 12, 20, 24, 27	1.75
11/16		11	11	11	10, 12	1.75
	23/32	11	11		10, 12	1.75
3/4		10	10	10	12, 20, 27	2.00
	25/32	10	10		12, 20, 27	2.00
13/16		10	10	10	12	2.00
	27/32	10	10		12	2.00
7/8		9	9	9	10, 12, 27	2.75
	29/32	9	9		10, 12, 27	2.75
15/16		9	9	9	12	2.75
	31/32	9	9		12	2.75
1		8	8	8	12, 27	2.75
	1 1/32	8	8		12, 27	2.75
1 1/16		8	8		12	4.00
1 1/8		7	7	7	8, 12	4.00
	1 5/32	7	7		8, 12	4.00
1 3/16		7	7			4.00
1 1/4		7	7	7	12	4.00
	1 9/32	7	7		12	4.00
1 5/16		7	7			5.00
1 3/8		6	6			5.00
	1 13/32	6	6	6		5.00
1 7/16		6	6			5.00
1 1/2		6	6	6		5.00
	1 17/32	6	6			5.00

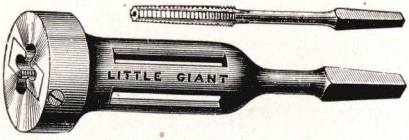
For price on Screw Plate Collets see page 31.
For price on Machine Collets see page 188.
A description of above size is given on pages 10 to 15.

Do not fail to state whether Plate or Machine Dies are wanted.

Little Giant

TAPS, DIES AND COLLETS.

FOR BIT BRACE USE.



With the Bit Brace Collet and Die, threads can be cut with great rapidity, and it can be used in places where a screw plate cannot, for instance on clips, after they are shaped. Bolts can be dressed over if the threads have been bruised, without removing from place, etc.

PRICES.

Size	3/16	1/4	5/16	3/8	7/16
Number of Threads	24	20	18	16	14
Tap, Die, and Collet	$1.90	$1.90	$1.95	$2.25	$2.35
Die	1.00	1.00	1.00	1.25	1.25
Tap	.50	.50	.55	.60	.70

Collets, each, 50 cents.

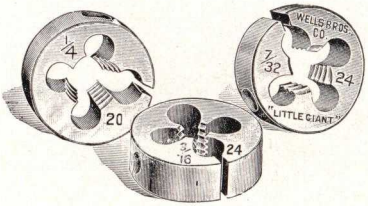
We send these "V" form of thread rough iron size, number of threads to the inch as per list above.

Exact sizes furnished at same prices.

We can also furnish these with the regular number of threads for pump rod use (see page 53) at regular prices when desired.

Little Giant.

ROUND ADJUSTABLE SPLIT DIES.



All sizes and threads not listed will be considered special. Prices given on application.

Stocks holding these Dies are listed on page 82.

Outside Diameter, 5/8 inch. Thickness, 1/4 inch.

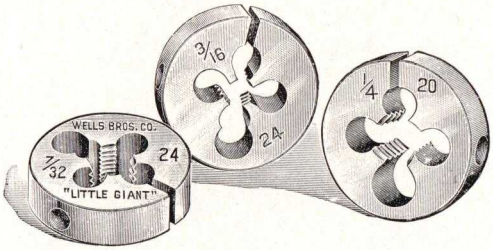
Size of Screw Gauge	NO. OF THREADS TO INCH				Price Each
	"V" Standard	United States Standard	Whitworth Standard	"V" Threads also Furnished	
No. 1				56, 60, 64, 72	$0.40
1½				56	.40
2	56			48, 64	.40
3	48			40, 56	.40
4	36			32, 40, 42, 48	.40
5	36			32, 40	.40
6	32			30, 36, 38, 40, 48	.40
7	32			30, 40	.40
8	32			30, 36, 40	.40
9	30			28, 32	.40
10	24			28, 30, 32, 36	.40
11	24			28, 30	.40
12	24			20, 32	.40
13	22			20, 24, 32	.40
14	20			18, 24	.40
1/16 inch	72	64	60	60, 64	.40
5/64	72			56, 60, 64	.40
3/32	56	50	48	48, 50, 54, 60	.40
7/64	56			48	.40
1/8	40	40	40	32, 36, 48, 50	.40
9/64	40			32, 36	.40
5/32	32	36	32	30, 36, 40	.40
11/64	32			36	.40
3/16	24	*32	*24	30, 32, 36	.40
13/64	24	*32		32	.40
7/32	24	28	24	32	.40
15/64	24			32	.40
1/4	20	20	20	24, 27, 32	.40
17/64	20	20		24, 27, 32	.40

*We also furnish 3/16 and 13/64 inch Dies at regular list and discount with 24 threads to the inch United States Standard form, and 3/16 dies with 32 threads to the inch Whitworth Standard form.

For prices on Screw Plates with Dies of this diameter, see page 77

Little Giant.

ROUND ADJUSTABLE SPLIT DIES.



Sizes and threads not given in this list will be considered special. Prices given on application.

Stocks holding these Dies are listed on page 82.

Outside Diameter, $\frac{13}{16}$ inch. Thickness, $\frac{1}{4}$ inch.

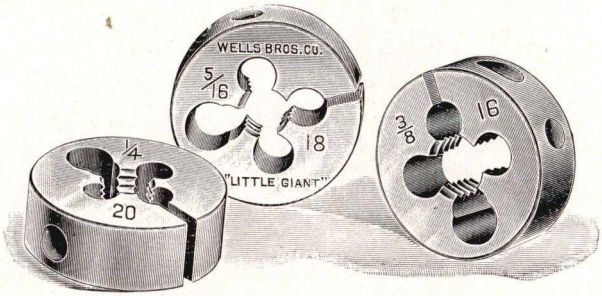
Screw Gauge Size	NO. OF THREADS TO INCH				Price Each
	"V" Standard	United States Standard	Whitworth Standard	"V" Threads also Furnished	
No. 1				56, 60, 64, 72	$0.40
1½				56,	.40
2	56			48, 64	.40
3	48			40, 56	.40
4	36			32, 40, 42, 48	.40
5	36			32, 40	.40
6	32			30, 36, 38, 40, 48	.40
7	32			30, 40	.40
8	32			30, 36, 40	.40
9	30			28, 32	.40
10	24			28, 30, 32, 36	.40
11	24			24, 28, 30	.40
12	24			20, 32	.40
13	22			20, 22, 24, 32	.40
14	20			18, 24	.40
15	20			18, 20, 24	.40
16	18			16, 20	.40
$\frac{1}{16}$ inch	72	64	60	60, 64	.40
$\frac{5}{64}$	72			56, 60, 64	.40
$\frac{3}{32}$	56	50	48	48, 50, 54, 60	.40
$\frac{7}{64}$	56			48	.40
$\frac{1}{8}$	40	40	40	32, 36, 48, 50	.40
$\frac{9}{64}$	40			32, 36	.40
$\frac{5}{32}$	32	36	32	30, 36, 40	.40
$\frac{11}{64}$	32			36	.40
$\frac{3}{16}$	24	*32	*24	30, 32, 36	.40
$\frac{13}{64}$	24	*32		30, 32	.40
$\frac{7}{32}$	24	28	24	32	.40
$\frac{15}{64}$	24			32	.40
$\frac{1}{4}$	20	20	20	24, 27, 32	.40
$\frac{17}{64}$	20	20		24, 27, 32	.40
$\frac{9}{32}$	20	20		24, 27, 32	.40
$\frac{5}{16}$	18	18	18	20, 24, 27, 32	.40

*We also furnish $\frac{3}{16}$ and $\frac{13}{64}$ inch Dies at regular list and discount with 24 threads to the inch United States Standard form, and $\frac{3}{16}$ Dies with 32 threads to the inch Whitworth Standard form.

For prices of Screw Plates with Dies of this diameter, see page 79.

Little Giant.

ROUND ADJUSTABLE SPLIT DIES.



Sizes and threads not given in this list will be considered special. Prices given on application. Stocks holding these dies are listed on page 82.

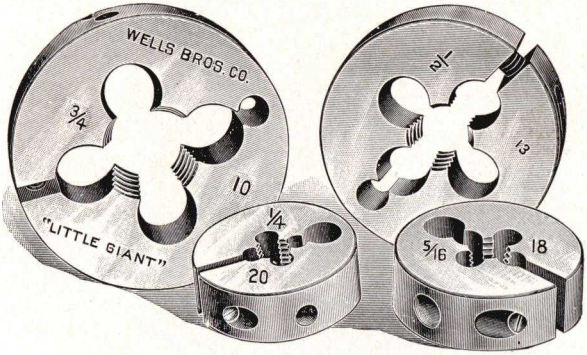
Outside Diameter, 1 inch. Thickness, 3/8 inch.

Cutting Size	NO. OF THREADS TO INCH				Price Each
	"V" Standard	United States Standard	Whitworth Standard	"V" Threads also Furnished	
4	36			32, 40, 42, 48	$0.75
5	36			32, 40	.75
6	32			30, 36, 38, 40, 48	.75
7	32			30, 40	.75
8	32			30, 36, 40	.75
9	30			28, 32	.75
10	24			28, 30, 32, 36	.75
11	24			24, 28, 30	.75
12	24			20, 32	.75
13	22			20, 22, 24, 32	.75
14	20			18, 24	.75
15	20			18, 20, 24	.75
16	18			16, 20	.75
18	18			16, 20	.75
20	16			18	.75
22	16			18	.75
24	16			14, 18	.75
1/8	40	40	40	32, 36, 48, 50	.75
9/64	40			32, 36	.75
5/32	32	36	32	30, 36, 40	.75
11/64	32			36	.75
3/16	24	*32	*24	30, 32, 36	.75
13/64	24	*32		30, 32	.75
7/32	24	28	24	32	.75
15/64	24			32	.75
1/4	20	20	20	24, 27, 32	.75
17/64	20	20		24, 27, 32	.75
9/32	20	20		24, 27, 32	.75
5/16	18	18	18	20, 24, 27, 32	.75
21/64	18	18		20, 24, 27, 32	.75
11/32	18	18		20, 24, 27, 32	.75
3/8	16	16	16	14, 18, 20, 24, 27	.75
25/64	16	16		14, 18, 20, 24, 27	.75
13/32	16	16		14, 18, 20, 24, 27	.75
7/16	14	14	14	12, 16, 20, 24, 27	.75

*We also furnish 3/16 and 13/64 inch dies at regular list and discount with 24 threads to the inch United States Standard form and 3/16 dies with 32 threads to the inch Whitworth Standard form.

Little Giant.

ROUND ADJUSTABLE SPLIT DIES.



PRICE LIST OF ROUND SPLIT DIES.

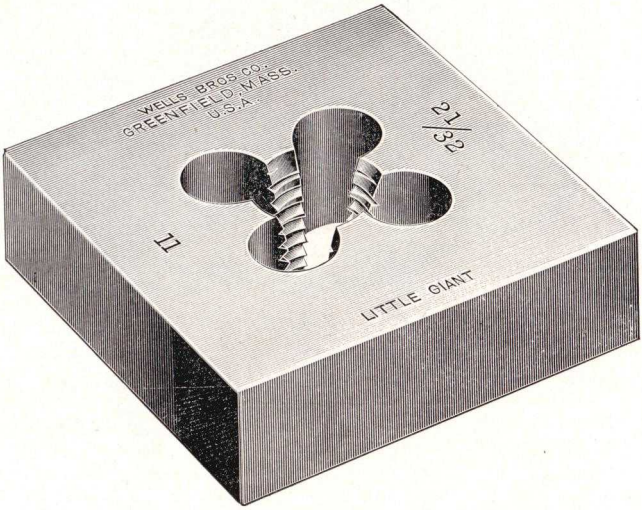
Diam.	$1\frac{5}{16}$	$1\frac{7}{16}$	$1\frac{1}{2}$	$1\frac{9}{16}$	2	$2\frac{3}{16}$	$2\frac{1}{4}$	$2\frac{1}{2}$	$2\frac{15}{16}$
Thickness	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{7}{8}$
$\frac{1}{4}$	$1.00	$1.00	$1.00	$1.25	$1.25		$1.50	$1.50	
$\frac{5}{16}$	1.00	1.00	1.00	1.25	1.25		1.50	1.50	
$\frac{3}{8}$	1.00	1.00	1.00	1.25	1.25		1.50	1.50	
$\frac{7}{16}$	1.00	1.00	1.00	1.25	1.25		1.50	1.50	
$\frac{1}{2}$	1.00	1.00	1.00	1.25	1.25		1.50	1.50	
$\frac{9}{16}$				1.25	1.50		1.75	1.75	
$\frac{5}{8}$				1.25	1.50		1.75	1.75	
$\frac{11}{16}$					1.75	$2.00	2.00	2.00	
$\frac{3}{4}$					1.75	2.00	2.00	2.00	
$\frac{13}{16}$						2.00	2.00	2.25	
$\frac{7}{8}$						2.25	2.25	2.25	
$\frac{15}{16}$						2.50	2.50	2.50	
1						2.50	2.50	2.50	
$1\frac{1}{8}$									$4.40
$1\frac{1}{4}$									5.00
$1\frac{3}{8}$									5.75
1									7.00

We can furnish Stocks for Dies $1\frac{5}{16}$, $1\frac{1}{2}$ and $1\frac{9}{16}$ inch Diameter. For prices see page 222. "V" OVERSIZE always sent unless otherwise ordered. "V" exact, U. S. S. and Whitworth threads furnished at same prices.

Little Giant.

SOLID SQUARE BOLT DIES.

U. S. STANDARD, SHARP "V" OR WHITWORTH FORMS OF THREAD.



FOR BOLTS.

PRICE LIST.

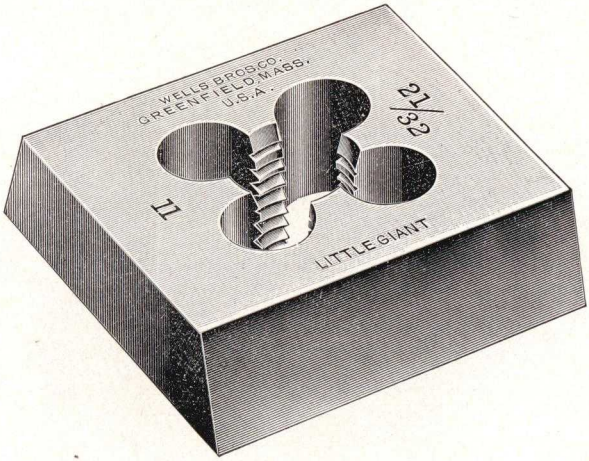
Standard	United States Standard	"V" Standard	Whitworth Standard	Size of Square	Thickness	Price Each
¼	20	20	20	2½	½	$1.80
5/16	18	18	18	2½	½	1.80
3/8	16	16	16	2½	½	1.80
7/16	14	14	14	2½	½	1.80
½	13	12	12	2½	¾	1.80
9/16	12	12	12	2½	¾	1.90
⅝	11	11	11	2½	¾	2.00
11/16	11	11	11	2½	¾	2.15
¾	10	10	10	2½	¾	2.25
13/16	10	10	10	2½	¾	2.30
⅞	9	9	9	2½	¾	2.40
15/16	9	9	9	2½	¾	2.55
1	8	8	8	2½	1	2.70
1⅛	7	7	7	2½	1	3.00
1¼	7	7	7	2½	1	3.30
1⅜	6	6	6	2½	1	3 60
1½	6	6	6	3	1	3.90
1⅝	5½	5	5	3	1	4.20
1¾	5	5	5	3	1¼	5.40
1⅞	5	4½	4½	3½	1½	6.50
2	4½	4½	4½	3¾	2	7.50

For list of other "V" threads also furnished at regular prices refer to list of dies on pages 85 and 86. All dies will be sent with "V" oversize thread, unless otherwise ordered. U. S. S. and Whitworth threads at same prices.

Little Giant.

SOLID BEVELED EDGE BOLT DIES.

U. S. STANDARD, SHARP "V" OR WHITWORTH FORMS OF THREAD.



PRICE LIST.

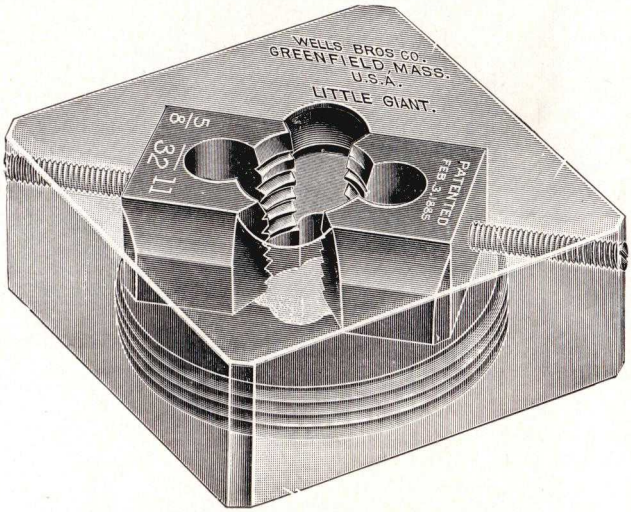
Cutting Size	No. of Threads to Inch			Thickness	Prices Each	
	United States Standard	"V" Standard	Whitworth Standard		2¼ in. Square	3 in. Square.
1/4	20	20	20	1/2	1.80	$1.80
5/16	18	18	18	1/2	1.80	1.80
3/8	16	16	16	1/2	1.80	1.80
7/16	14	14	14	1/2	1.80	1.80
1/2	13	12	12	3/4	1.80	1.80
9/16	12	12	12	3/4	1.90	2.00
5/8	11	11	11	3/4	2.00	2.00
11/16	11	11	11	3/4	2.15	2.15
3/4	10	10	10	3/4	2.25	2.25
13/16	10	10	10	1	2.30	2.30
7/8	9	9	9	1 3/4	2.40	2.40
15/16	9	9	9	1 3/4	2.55	2.55
1	8	8	8	1 3/4	.70	2.70
1 1/8	7	7	7	2		3.00
1 1/4	7	7	7	1		3.30
1 3/8	6	6	6	1		3.60
1 1/2	6	6	6	1		3.90

For "V" threads also furnished see list of Threads on Dies on pages 85 and 86. All orders will be filled with "V" Threads oversize unless otherwise specified. U. S. S. and Whitworth Threads sent when wanted at same prices.

Little Giant.

ADJUSTABLE BEVEL DIE WITH GUIDE IN SOLID SQUARE COLLET.

FOR USE IN PLACE OF THE SOLID BOLT DIE.



Patent Adjustable Die with Solid Square Holder.

The old style of Solid Bolt Die used for so many years has many disadvantages, in common use, owing largely to the fact that it soon wears large so that taps and dies will not cut threads that will perfectly match and make a satisfactory fit. In use the die wears larger while the tap wears smaller. To overcome this, adjustable dies are taking their place, and our patent adjustable die is well adapted for this work. We furnish these dies put up as illustrated above.

LIST OF SIZES AND PRICES OF BOLT AND PIPE.

Cutting Size	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1	1 1/8	1 1/4	1 3/8	1 1/2
Pr. Bolt Die	1.00	1.00	1.25	1.25	1.50	1.50	1.75	1.75	2.00	2.00	2.75	2.75	2.75	4.00	4.00	5.00	5.00
Price of Holder 2 1/2 × 2 1/2, price complete, 60 cents. 3 × 3 and 4 × 4, $1.00 each.																	
Pr. of Guide	0.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.50	.50	.50	.50
Pr. Pipe Die	1.00	....	1.25	....	1.25	....	....	....	1.25	....	....	....	1.25	....	2.00	....	....

No. 1	Holders	for	Bolt	Dies	1/4	to 1	inch	are	2 1/2	inches	square	and 1	inch thick.
No. 2	"	"	"	"	1/4	to 1	"	"	3	"	"	" 1	" "
No. 3	"	"	"	"	1/2	to 1 1/2	"	"	4	"	"	" 1 1/2	" "
No. 4	"	"	Pipe	"	1/4	to 1 1/4	"	"	4	"	"	" 1 1/4	" "
No. 5	"	"	"	"	1/8	to 1/2	"	"	2 1/2	"	"	" 1	" "

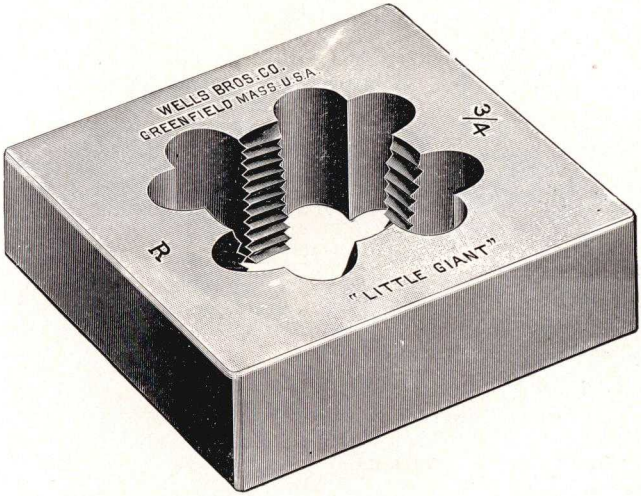
These dies, when furnished complete, are made to fit the Solid Die Stocks of the outside diameters given above. For cutting Stay Bolts, Patch Bolts, and numerous special jobs, these dies will be found to be very convenient.

We furnish these dies in regular forms and pitch given in our lists of dies on other pages in our catalog.

Little Giant.

SOLID SQUARE DIES.

FOR PIPE.



PRICE LIST.

Size.	Dimension of Dies.	Price.	Price of Collets Fitted to Bolt Cutters.
1/8 to 1/2	2 × 2 × 1/2	$1.50	$1.50
1/8 to 1	2 1/2 × 2 1/2 × 3/4	2.00	1.50
1/2 to 1 1/2	3 × 3 × 3/4	2.50	1.50
1 to 2	4 × 4 × 7/8	3.50	2.50
2 1/2 to 3	5 × 5 × 1 1/4	9.00	....

LEFT-HAND DIES furnished at same list prices.

RIGHT-HAND DIES always sent unless otherwise ordered.

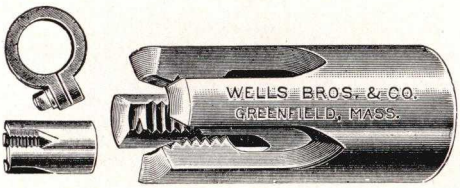
These dies will fit any make of stock, holding dies of above dimensions.

We furnish Collets to fit spindles of our Bolt Cutters (shanks 2 3/4 inch diameter) for holding these dies, at following prices:

2 × 2 1/2, 2 1/2 × 2 1/2 × 3/4, and 3 × 3 × 3/4 for $1.50 each.
4 × 4 × 7/8, for $2.50 each.

Little Giant

SPRING SCREW THREADING DIE.



This die is adjustable by means of the clamp collar shown in the above cut. For uniform and well finished threads, better results will be had if two dies are used—one for roughing, the other for finishing. Dies can be readily sharpened.

Clamp collar for dies is not sent unless specified.

All orders will be filled with "V" Oversize Threads unless otherwise ordered.

Sizes and threads not listed will be considered special and subject to special prices.

Cutting Size	United States Standard	"V" Standard	Whitworth Standard	SIZE OF DIE		Price Each	Clamp Collar-Price Each
				Diameter Inches	Length Inches		
1/8	40	40	40	1/2	1 1/4	$1.50	$0.50
3/16	*32	24	*24	1/2	1 1/4	1.50	.50
1/4	20	20	20	1/2	1 1/4	1.50	.50
1/4	20	20	20	3/4	1 3/4	1.75	.60
5/16	18	18	18	3/4	1 3/4	1.75	.60
3/8	16	16	16	3/4	1 3/4	1.75	.60
3/8	16	16	16	1	2	2.00	.70
7/16	14	14	14	1	2	2.00	.70
1/2	†13	12	12	1	2	2.00	.70
5/8	11	11	11	1 7/16	2 1/4	2.00	.80
11/16	11	11	11	1 7/16	2 1/4	2.00	.80
3/4	10	10	10	1 7/16	2 1/4	2.00	.80
3/8	16	16	16	1 1/4	2 1/2	2.00	.80

*We also furnish 3/16 Spring Dies at regular list and discount with 24 threads to the inch, United States Standard form, and 32 threads to the inch, Whitworth Standard form.

†Spring Dies, cutting 1/2 inch with 12 threads to the inch United States Standard form, furnished at regular list and discount.

Little Giant.

SPRING SCREW THREADING DIES AND CLAMP COLLARS.

(Concluded.)

Cutting Size	United States Standard	"V" Standard	Whitworth Standard	SIZE OF DIE		Price Each	Clamp Collar Price Each
				Diameter Inches	Length Inches		
7/16	14	14	14	1 1/4	2 1/2	$2.00	$0.80
1/2	†13	12	12	1 1/4	2 1/2	2.00	.80
9/16	12	12	12	1 1/4	2 1/2	2.00	.80
5/8	11	11	11	1 1/4	2 1/2	2.00	.80
3/4	10	10	10	1 1/4	2 1/2	2.00	.80
1/2	†13	12	12	1 3/8	2 1/2	2.40	1.00
9/16	12	12	12	1 3/8	2 1/2	2.40	1.00
5/8	11	11	11	1 3/8	2 1/2	2.40	1.00
3/4	10	10	10	1 3/8	2 1/2	2.40	1.00
5/8	11	11	11	1 5/8	2 1/2	2.75	1.20
3/4	10	10	10	1 5/8	2 1/2	2.75	1.20
13/16	10	10	10	1 5/8	2 1/2	2.75	1.20
7/8	9	9	9	1 5/8	2 1/2	2.75	1.20
1	8	8	8	1 5/8	2 1/2	2.75	1.20
3/4	10	10	10	2	3	3.50	1.50
7/8	9	9	9	2	3	3.50	1.50
15/16	9	9	9	2	3	3.50	1.50
1	8	8	8	2	3	3.50	1.50
1 1/8	7	7	7	2	3	3.50	1.50
1 1/4	7	7	7	2	3	3.50	1.50
1	8	8	8	2 1/2	3 1/2	5.00	2.50
1 1/8	7	7	7	2 1/2	3 1/2	5.00	2.50
1 1/4	7	7	7	2 1/2	3 1/2	5.00	2.50
1 3/8	6	6	6	2 1/2	3 1/2	5.00	2.50
1 1/2	6	6	6	2 1/2	3 1/2	5.00	2.50
1 5/8	5 1/2	5	5	3 1/4	4	8.00	5.00
1 3/4	5	5	5	3 1/4	4	8.00	5.00
1 7/8	5	4 1/2	4 1/2	3 1/4	4	8.00	5,00
2	4 1/2	4 1/2	4 1/2	3 1/4	4	8.00	5.00

For list of "V" threads also furnished at regular prices, see pages 85 and 86.

†Spring Dies, cutting 1/2 inch with 12 threads to the inch United States Standard form, furnished at regular list and discount.

Little Giant.

SELF OPENING SCREW CUTTING DIE HEAD

FOR USE ON

TURRET HEAD MACHINES.

The illustration above shows our latest improvement in opening Die Heads. Users of this class of tools will appreciate the many superior points.

The Die head itself is similar in construction to the Die head furnished with our Opening Die Bolt Cutters shown in Section 8. These Die Heads, however, are arranged for use on Turret, Hand or Automatic Screw Machines.

It is arranged to open automatically and the device can be set at any point desired.

Has micrometer adjustment. For a more detailed description regarding this point read what we say about adjustment of the opening Die Heads used with Bolt Cutters. See pages 196–198.

LIST OF SIZES AND PRICES.

Number	Capacity	Outside Diameter of Head	Price of Head Without Dies	Price Per Set Dies	Number of Dies in Set
10	Threads all sizes to ½″	4	$40.00	$2.00	4
20	" " " ¾″	5	50.00	2.25	4
30	" " " 1″	7	60.00	2.50	4

When ordering be sure to state whether "V", U. S. S. or Whitworth Threads are wanted.

SECTION V.

PAGES 99 TO 140.

TAPS.

MACHINE SCREW.
MACHINISTS' HAND.
MACHINE NUT.
PULLEY.
TAPPER.
HORSE SHOE CALK.
STAY BOLT.
SPINDLE STAY BOLT.
BIT BRACE.
BLACKSMITH TAPER.
BEAMAN & SMITH.
STOVE BOLT.
BOILER.
PATCH BOLT.
GROOVED SHANK.
HOB.
BRASS TUBING.
COMBINED DRILL AND PIPE TAP.
PIPE TAPS AND PIPE REAMERS.
PIPE HOB.
INSERTED LANDS PIPE.
MUD PLUG.
SHELL.
SETS IN CASE.

Little Giant.

MACHINE SCREW TAPS.

LIST OF SIZES AND PRICES.

Less than six of a size and thread will be charged at rate of single Taps.

These Taps furnished in sets of Taper, Plug and Bottoming, when desired, at regular prices.

All sizes and threads not listed will be considered special, and subject to special prices.

Left hand Taps are special.

Size of Screw Gauge	Standard No. of Threads	Threads also Furnished	PRICE	
			Each	Per Dozen
No. 1		56, 60, 64, 72	$0.35	$4.00
1½		56	35	4.00
2	56	48, 64	.35	4.00
3	48	40, 56	.35	4.00
4	36	32, 40, 42, 48	.35	4.00
5	36	32, 40	.35	4.00
6	32	30, 36, 38, 40, 48	.35	4.00
7	32	30, 40	.35	4.00
8	32	30, 36, 40	.35	4.00
9	30	28, 32	.35	4.00
10	24	28, 30, 32, 36	.35	4.00
11	24	28, 30	.35	4.00
12	24	20, 32	.35	4.00
13	22	20, 24, 32	.38	4.40
14	20	18, 24	.38	4.40
15	20	18, 24	.38	4.40
16	18	16, 20	.38	4.40
18	18	16, 20	.38	4.40
20	16	18	.45	5.30
22	16	18	.45	5.30
24	16	14, 18	.45	5.30
26	16	14	.53	6.30
28	14	16	.53	6.30
30	14	16	.53	6.30

Our Taps have the size of the necessary Twist Drill to be used with Tap stamped on Shank of same.

Little Giant.

HAND TAPS SMALLER THAN ¼ INCH.

All orders will be filled with "V" Standard Threads, unless otherwise specified.

All sizes, lengths, and threads not listed will be considered special and subject to special prices.

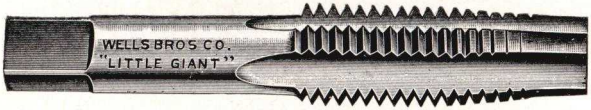
Diameter	NO. OF THREADS TO INCH				PRICE	
	"V" Standard	United States Standard	Whitworth Standard	"V" Threads also Furnished	Each	Per Set
$\frac{1}{16}$	72	64	60	60, 64	$0.35	$1.05
$\frac{5}{64}$	72			56, 60, 64	.35	1.05
$\frac{3}{32}$	56	50	48	48, 50, 54, 60	.35	1.05
$\frac{7}{64}$	56			48,	.35	1.05
$\frac{1}{8}$	40	40	40	32, 36, 48, 50	.35	1.05
$\frac{9}{64}$	40			32, 36	.35	1.05
$\frac{5}{32}$	32	36	32	30, 36, 40	.35	1.05
$\frac{11}{64}$	32			36	.35	1.05
$\frac{3}{16}$	24	*32	*24	30, 32, 36	.35	1.05
$\frac{13}{64}$	24	*32		32	.35	1.05
$\frac{7}{32}$	24	28	24	32	.35	1.05
$\frac{15}{64}$	24			32	.35	1.05

*We also furnish $\frac{3}{16}$ and $\frac{13}{64}$ Hand Taps at regular list and discount with 24 threads to the inch United States Standard form, and $\frac{3}{16}$ Hand Taps with 32 threads to the inch Whitworth Standard form.

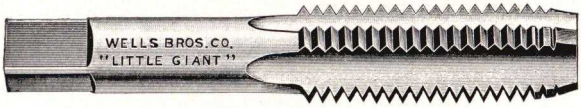
Little Giant.

MACHINISTS' HAND TAPS.

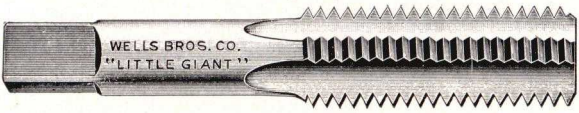
SHANKS SIZE OF BOTTOM OF THREAD.



Taper



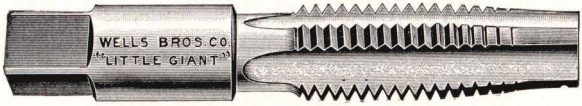
Plug



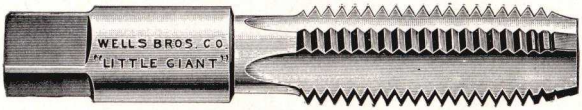
Bottoming

All orders for Hand Taps to and including $\frac{11}{32}$ inch will be filled with shanks the full size of thread. Orders for $\frac{3}{8}$ inch Hand Taps, and larger wiill be filled with shanks size of bottom of thread, unless otherwise ordered.

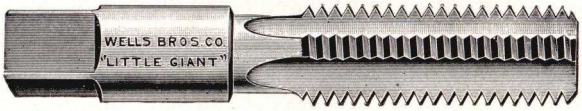
SHANKS FULL SIZE OF THREAD.



Taper



Plug



Bottoming

We will furnish, if desired, Hand Taps with shanks the full size of thread on all sizes to 4 inch inclusive.

The following sets of Machinists' Hand Taps are regularly carried in stock and will be furnished at list prices given on following pages:

Right Hand.—U. S. Standard, Whitworth and "V" forms, $\frac{3}{16}$ to 4 inches, inclusive.

Left Hand.—U. S. Standard, Whitworth and "V" forms, of regular pitch, $\frac{1}{4}$ to 2 inches, inclusive.

Over-Sizes: Right Hand.—U. S. Standard and "V" forms, $\frac{1}{64}$ inch large, $\frac{1}{4}$ to $\frac{5}{8}$ inch, inclusive; $\frac{1}{32}$ inch large, $\frac{1}{4}$ to 4 inches, inclusive.

Over-Sizes: Left Hand.—In U. S. Standard and Sharp "V" forms of Standard pitch, $\frac{1}{64}$ inch large, $\frac{3}{16}$ to $\frac{5}{8}$ inch, inclusive; $\frac{1}{32}$ inch large, $\frac{3}{16}$ to 2 inches, inclusive.

MACHINISTS' HAND TAPS.

All orders will be filled with "V" Threads unless otherwise specified.

All sizes, lengths, and threads not listed will be considered special and subject to special prices.

DIAMETER		Total Length, Inches	NO. OF THREADS TO INCH				PRICE.	
Standard Size	Rough Iron Size		United States Standard	"V" Standard	Whitworth Standard	"V" Threads also Furnished	Each	Per Set
$\frac{3}{16}$		$2\frac{3}{8}$	*32	24	*24	30, 32, 36	$0.35	$1.05
	$\frac{13}{64}$	$2\frac{3}{8}$	*32	24		32	.35	1.05
	$\frac{7}{32}$	$2\frac{3}{8}$	28	24	24	32	.35	1.05
$\frac{1}{4}$		$2\frac{1}{2}$	20	20	20	24, 27, 32	.45	1.35
	$\frac{17}{64}$	$2\frac{1}{2}$	20	20		24, 27, 32	.45	1.35
	$\frac{9}{32}$	$2\frac{1}{2}$	20	20		24, 27, 32	.45	1.35
$\frac{5}{16}$		$2\frac{23}{32}$	18	18	18	20, 24, 27, 32	.50	1.50
	$\frac{21}{64}$	$2\frac{23}{32}$	18	18		20, 24, 27, 32	.50	1.50
	$\frac{11}{32}$	$2\frac{23}{32}$	18	18		20, 24, 27, 32	.50	1.50
$\frac{3}{8}$		$2\frac{15}{16}$	16	16	16	14, 18, 20, 24, 27	.55	1.65
	$\frac{25}{64}$	$2\frac{15}{16}$	16	16		14, 18, 20, 24, 27	.55	1·65
	$\frac{13}{32}$	$2\frac{15}{16}$	16	16		14, 18, 20, 24, 27	.55	1.65
$\frac{7}{16}$		$3\frac{5}{32}$	14	14	14	12, 16, 20, 24, 27	.60	1.80
	$\frac{29}{64}$	$3\frac{5}{32}$	14	14		12, 16, 20, 24, 27	.60	1.80
	$\frac{15}{32}$	$3\frac{5}{32}$	14	14		12, 16, 20, 24, 27	.60	1.80

*We also furnish $\frac{3}{16}$ and $\frac{13}{64}$ inch Hand Taps at regular list and discount, with 24 threads to the inch, United States Standard form, and $\frac{3}{16}$ inch Hand Taps with 32 threads to the inch, Whitworth Standard form.

Little Giant.

MACHINISTS' HAND TAPS

(Continued)

DIAMETER		NO. OF THREADS TO INCH					PRICE	
Standard Size	Rough Iron Size	Total Length Inches	United States Standard	"V" Standard	Whitworth Standard	"V" Threads also Furnished	Each	Per Set
1/2		3 3/8	*13	12	12	13, 14, 16, 20, 24, 27	$0.70	$2.10
	33/64	3 3/8	*13	12		13, 14, 16, 20, 24, 27	.70	2.10
	17/32	3 3/8	*13	12		13, 14, 16, 20, 24, 27	.70	2.10
9/16		3 19/32	12	12	12	14, 27	.80	2.40
	37/64	3 19/32	12	12		14, 27	.80	2.40
	19/32	3 19/32	12	12		14, 27	.80	2.40
5/8		3 13/16	11	11	11	10, 12, 20, 24, 27	.90	2.70
	41/64	3 13/16	11	11		10, 12, 20, 24, 27	.90	2.70
	21/32	3 13/16	11	11		10, 12, 20, 24, 27	.90	2.70
11/16		4 1/32	11	11	11	10, 12	1.05	3.15
	23/32	4 1/32	11	11		10, 12	1.05	3.15
3/4		4 1/4	10	10	10	12, 20, 27	1.20	3.60
	25/32	4 1/4	10	10		12, 20, 27	1.20	3.60
13/16		4 15/32	10	10	10	12	1.40	4.20
	27/32	4 15/32	10	10		12	1.40	4.20
7/8		4 11/16	9	9	9	10, 12, 27	1.60	4.80
	29/32	4 11/16	9	9		10, 12, 27	1.60	4.80
15/16		4 29/32	9	9	9	12	1.80	5.40
	31/32	4 29/32	9	9		12	1.80	5.40

*We also furnish, at regular list and discount, 1/2-inch Hand Taps in both even and rough iron sizes, with 12 threads to the inch, United States Standard form.

Little Giant.

MACHINISTS' HAND TAPS.

(Continued)

DIAMETER		Total Length, Inches	NO. OF THREADS TO INCH				PRICE	
Standard Size	Rough Iron Size		United States Standard	"V" Standard	Whitworth Standard	"V" Threads also Furnished	Each	Per Set
1		5 1/8	8	8	8	12, 27	$2.00	$6.00
	1 1/32	5 1/8	8	8		12, 27	2.00	6.00
1 1/16		5 1/8	8	8		12	2.15	6.45
1 1/8		5 7/16	7	7	7	8, 12	2.25	6.75
	1 5/32	5 7/16	7	7		8, 12	2.25	6.75
1 3/16		5 7/16	7	7			2.45	7.35
1 1/4		5 3/4	7	7	7	12	2.60	7.80
	1 9/32	5 3/4	7	7		12	2.60	7.80
1 5/16		5 3/4	7	7			2.80	8.40
1 3/8		6 1/16	6	6	6		3.00	9.00
	1 13/32	6 1/16	6	6			3.00	9.00
1 7/16		6 1/16	6	6			3.25	9.75
1 1/2		6 3/8	6	6	6		3.50	10.50
	1 17/32	6 3/8	6	6			3.50	10.50
1 5/8		6 11/16	5 1/2	5	5		4.20	12.60
	1 21/32	6 11/16	5 1/2	5			4.20	12.60
1 3/4		7	5	5	5		5.00	15.00
	1 25/32	7	5	5			5.00	15.00

MACHINISTS' HAND TAPS.

(Continued)

DIAMETER		Total Length, Inches	NO. OF THREADS TO INCH			PRICE	
Standard Size	Rough Iron Size		United States Standard	"V" Standard	Whitworth Standard	Each	Per Set
1 7/8		7 5/16	5	4 1/2	4 1/2	$5.80	$17.40
	1 29/32	7 5/16	5	4 1/2		5.80	17.40
2		7 5/8	4 1/2	4 1/2	4 1/2	6.70	20.10
	2 1/32	7 5/8	4 1/2	4 1/2		6.70	20.10
2 1/8		8	4 1/2	4 1/2	4 1/2	8.00	24.00
	2 5/32	8	4 1/2	4 1/2		8.00	24.00
2 1/4		8 1/4	4 1/2	4 1/2	4	9.20	27.60
	2 9/32	8 1/4	4 1/2	4 1/2		9.20	27.60
2 3/8		8 1/2	4	4 1/2	4	10.50	31.50
	2 13/32	8 1/2	4	4 1/2		10.50	31.50
2 1/2		8 3/4	4	4	4	11.50	34.50
	2 17/32	8 3/4	4	4		11.50	34.50
2 5/8		9	4	4	4	13.00	39.00
	2 21/32	9	4	4		13.00	39.00
2 3/4		9 1/4	4	4	3 1/2	14.00	42.00
	2 25/32	9 1/4	4	4		14.00	42.00
2 7/8		9 1/2	3 1/2	4	3 1/2	15.50	46.50
	2 29/32	9 1/2	3 1/2	4		15.50	46.50

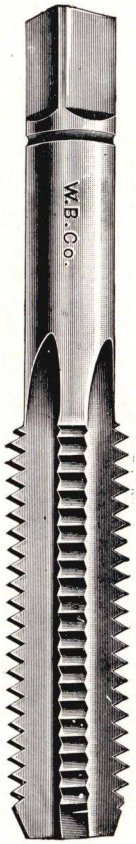
MACHINISTS' HAND TAPS.

(Concluded.)

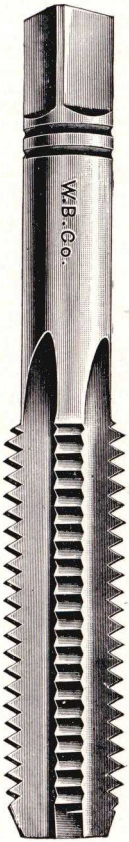
DIAMETER		Total Length, Inches	NO. OF THREADS PER INCH			PRICE	
Standard Size	Rough Iron Size		United States Standard	"V" Standard	Whitworth Standard	Each	Per Set
3		9¾	3½	3½	3½	$17.00	$51.00
	$3\frac{1}{32}$	9¾	3½	3½		17.00	51.00
3⅛		9¾	3½	3½	3½	18.75	56.25
	$3\frac{5}{32}$	9¾	3½	3½		18.75	56.25
3¼		10	3½	3½	3¼	20.50	61.50
	$3\frac{9}{32}$	10	3½	3½		20.50	61.50
3⅜		10	3¼	3¼	3¼	22.00	66.00
	$3\frac{13}{32}$	10	3¼	3¼		22.00	66.00
3½		10¼	3¼	3¼	3¼	24.00	72.00
	$3\frac{17}{32}$	10¼	3¼	3¼		24.00	72.00
3⅝		10¼	3¼	3¼	3¼	26.00	78.00
	$3\frac{21}{32}$	10¼	3¼	3¼		26.00	78.00
3¾		10½	3	3	3	28.50	85.50
	$3\frac{25}{32}$	10½	3	3		28.50	85.50
3⅞		10½	3	3	3	30.00	90.00
	$3\frac{29}{32}$	10½	3	3		30.00	90.00
4		10¾	3	3	3	32.50	97.50
	$4\frac{1}{32}$	10¾	3	3		32·50	97.50

Little Giant.

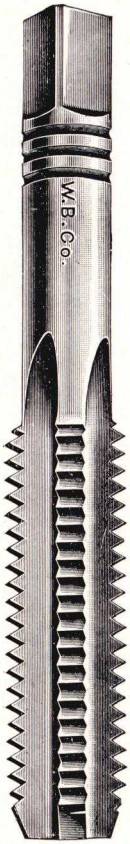
SETS OF TAPS FOR LOCOMOTIVE BUILDERS' USE.



No. 1



No. 2



No. 3

Sets of hand taps, $\frac{1}{4}$ to $1\frac{1}{2}$ inches diameter, of U. S. Standard thread, are carried in stock of forms and dimensions found by experiment to be peculiarly adapted for use of locomotive builders and others who wish to tap holes in frames, bed-plates, etc. with most ease in working and least liability of breaking the taps.

These are furnished in sets composed of Nos. 1, 2 and 3, corresponding In order of using to the taper, plug and bottoming.

Ordinarily these taps are stamped with numbers but as a convenience to our customers we are marking these with rings around the shank. No. 1 has one ring, No. 2 has two, and No. 3 three rings. These can be easily felt. This we think will be appreciated, as taps are often so greasy that it takes considerable time to distinguish the stamping. The No. can be told by simply feeling the rings on the shank.

SETS OF TAPS FOR LOCOMOTIVE BUILDERS' USE.

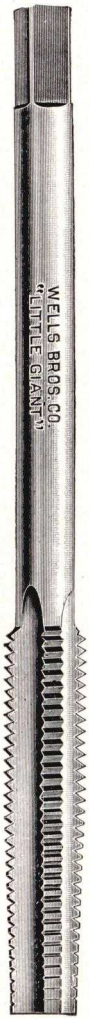
Each Tap removes a portion of the stock making an even hole and not a bell mouthed, as is the case with ordinary Taper, Plug and Bottoming Taps. This is the only style Tap that will make a parallel hole.

We furnish these Taps with U. S. S. Threads, although this is contrary to the general rules of our catalog. This is done as our experience shows that these Taps are seldom used in other styles.

Size.	U. S. Standard	Price Each.	Price Per Set.
1/4	20	$0.45	$1.35
5/16	18	.50	1.50
3/8	16	.55	1.65
7/16	14	.60	1.80
1/2	*13	.70	2.10
9/16	12	.80	2.40
5/8	11	.90	2.70
11/16	11	1.05	3.15
3/4	10	1.20	3.60
13/16	10	1.40	4.20
7/8	9	1.60	4.80
15/16	9	1.80	5.40
1	8	2.00	6.00
1 1/16	8	2.15	6.45
1 1/8	7	2.25	6.75
1 3/16	7	2.45	7.35
1 1/4	7	2.60	7.80
1 5/16	7	2.80	8.40
1 3/8	6	3.00	9.00
1 7/16	6	3.25	9.75
1 1/2	6	3.50	10.50

Other than U. S. Standard sizes will be furnished to order at special rates

*We also furnish as regular 1/2 inch Taps for Locomotive Builders with 12 threads to the inch, United States Standard form.



MACHINE NUT TAP.

All orders will be filled with "V" $\frac{1}{32}$ oversize threads unless otherwise ordered.

"V" Threads exact, U. S. S. and Whitworth Threads furnished at same prices.

Oversizes in "V" form $\frac{1}{64}''$ large $\frac{1}{4}$ to $\frac{5}{8}''$ inclusive.

Oversizes in "V" form $\frac{1}{32}''$ large $\frac{1}{4}$ to $4''$ inclusive.

Oversizes in U. S. S. $\frac{1}{64}''$ large $\frac{1}{4}$ to $\frac{5}{8}''$ inclusive.

Oversizes in U. S. S. $\frac{1}{32}''$ large $\frac{1}{4}$ to $4''$ inclusive.

Machine Nut Taps *Left Hand* with "V", U. S. S. or Whitworth threads of *Standard pitch* furnished at regular prices.

Taps with square or other unusual forms of thread furnished at special prices.

All sizes lengths and threads not listed are special and subject to special prices.

MACHINE NUT TAPS.

DIAMETER		Total Length, Inches	NO. OF THREADS TO INCH				Price Each
Standard Size	Rough Iron Size		United States Standard	"V" Standard	Whitworth Standard	"V" Threads also Furnished	
$\frac{3}{16}$		4½	*32	24	*24	32	$0.60
	$\frac{13}{64}$	4½	*32	24		32	.60
	$\frac{7}{32}$	4½	28	24	24	32	.60
¼		5	20	20	20	24	.60
	$\frac{17}{64}$	5	20	20		24	.60
	$\frac{9}{32}$	5	20	20		24	.60
$\frac{5}{16}$		5½	18	18	18	16, 20, 24	.70
	$\frac{21}{64}$	5½	18	18		16, 20, 24	.70
	$\frac{11}{32}$	5½	18	18		16, 20, 24	.70
⅜		6	16	16	16	14, 18	.80
	$\frac{25}{64}$	6	16	16		14, 18	.80
	$\frac{13}{32}$	6	16	16		14, 18	.80
$\frac{7}{16}$		6½	14	14	14	12, 16	.90
	$\frac{29}{64}$	6½	14	14		12, 16	.90
	$\frac{15}{32}$	6½	14	14		12, 16	.90

*We also furnish at regular list and discount $\frac{3}{16}$ and $\frac{13}{64}$ inch Machine Nut Taps with 24 threads to the inch, United States Standard form; and $\frac{3}{16}$ inch Machine Nut Taps with 32 Threads to the inch, Whitworth Standard form.

MACHINE NUT TAPS.

(Continued.)

DIAMETER		Total Length, Inches	NO. OF THREADS TO INCH				Price each
Standard Size	Rough Iron Size		United States Standard	"V" Standard	Whitworth Standard	"V" Threads also Furnished	
1/2		7	*13	12	12	13	$1.00
	33/64	7	*13	12		13	1.00
	17/32	7	*13	12		13	1.00
9/16		7 1/2	12	12	12	14	1.15
	37/64	7 1/2	12	12		14	1.15
	19/32	7 1/2	12	12		14	1.15
5/8		8	11	11	11	10, 12	1.30
	41/64	8	11	11		10, 12	1.30
	21/32	8	11	11		10, 12	1.30
11/16		8 1/2	11	11	11	12	1.45
	23/32	8 1/2	11	11		12	1.45
3/4		9	10	10	10	12	1.60
	25/32	9	10	10		12	1.60
13/16		9 1/2	10	10	10	12	1.80
	27/32	9 1/2	10	10		12	1.80
7/8		10	9	9	9	10, 12	2.10
	29/32	10	9	9		10, 12	2.10
15/16		10 1/2	9	9	9	12	2.40
	31/32	10 1/2	9	9		12	2.40

*We also furnish at same list price and discount, in both even and rough iron sizes, 1/2-inch Nut Taps, 12 threads to the inch, United States Standard form.

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MACHINE NUT TAPS.

(Continued)

DIAMETER		Total Length, Inches	NO. OF THREADS TO INCH				Price Each
Standard Size	Rough Iron Size		United States Standard	"V" Standard	Whitworth Standard	"V" Threads also furnished	
1		11	8	8	8	12	$2.80
	$1\frac{1}{32}$	11	8	8		12	2.80
$1\frac{1}{16}$		11	8	8			3.00
1⅛		11½	7	7	7	8	3.20
	$1\frac{5}{32}$	11½	7	7		8	3.20
$1\frac{3}{16}$		11½	7	7			3.45
1¼		12	7	7	7		3.70
	$1\frac{9}{32}$	12	7	7			3.70
$1\frac{5}{16}$		12	7	7			3.95
1⅜		12½	6	6	6		4.20
	$1\frac{13}{32}$	12½	6	6			4.20
$1\frac{7}{16}$		12½	6	6			4.45
1½		13	6	6	6		4.70
	$1\frac{17}{32}$	13	6	6			4.70
1⅝		13½	5½	5	5		5.30
	$1\frac{21}{32}$	13½	5½	5			5.30
1¾		14	5	5	5		6.00
	$1\frac{25}{32}$	14	5	5			6.00
1⅞		14½	5	4½	4½		6.80
	$1\frac{29}{32}$	14½	5	4½			6.80

MACHINE NUT TAPS.

(Continued)

DIAMETER		Total Length Inches	NO. OF THREADS TO INCH			Price Each
Standard Size	Rough Iron Size		United States Standard	"V" Standard	Whitworth Standard	
2		15	4½	4½	4½	$7.70
	2 1/32	15	4½	4½		7.70
2⅛		15½	4½	4½	4½	9.00
	2 5/32	15½	4½	4½		9.00
2¼		16	4½	4½	4	10.20
	2 9/32	16	4½	4½		10.20
2⅜		16½	4	4½	4	11.50
	2 13/32	16½	4	4½		11.50
2½		17	4	4	4	12.50
	2 17/32	17	4	4		12.50
2⅝		17½	4	4	4	14.00
	2 21/32	17½	4	4		14.00
2¾		18	4	4	3½	15.00
	2 25/32	18	4	4		15.00
2⅞		18½	3½	4	3½	16.50
	2 29/32	18½	3½	4		16.50

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MACHINE NUT TAPS.

(Concluded)

DIAMETER		Total Length, Inches	NO. OF THREADS TO INCH			Price Each
Standard Size	Rough Iron Size		United States Standard	"V" Standard	Whitworth Standard	
3		19	3½	3½	3½	$18.00
	$3\frac{1}{32}$	19	3½	3½		18.00
3⅛		19½	3½	3½	3½	19.75
	$3\frac{5}{32}$	19½	3½	3½		19.75
3¼		19½	3½	3½	3¼	21.50
	$3\frac{9}{32}$	19½	3½	3½		21.50
3⅜		20	3¼	3¼	3¼	23.00
	$3\frac{13}{32}$	20	3¼	3¼		23.00
3½		20	3¼	3¼	3¼	25.00
	$3\frac{17}{32}$	20	3¼	3¼		25.00
3⅝		20½	3¼	3¼	3¼	27.00
	$3\frac{21}{32}$	20½	3¼	3¼		27.00
3¾		20½	3	3	3	29.50
	$3\frac{25}{32}$	20½	3	3		29.50
3⅞		21	3	3	3	31.00
	$3\frac{29}{32}$	21	3	3		31.00
4		21	3	3	3	33.50
	$4\frac{1}{32}$	21	3	3		33.50

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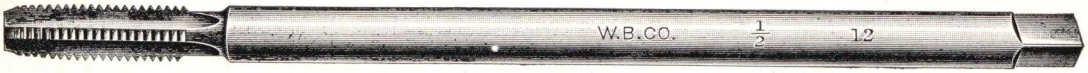
PULLEY TAPS.



Diameter Inches	NO. OF THREADS TO INCH			PRICE EACH									
	United States Standard	"V" Standard	Whitworth Standard	6-inch	8-inch	10-inch	12-inch	14-inch	16-inch	18-inch	20-inch	22-inch	24-inch
1/4	20	20	20	$0.65	$0.70	$0.80	$0.90						
5/16	18	18	18	.75	.80	1.00	1.20						
3/8	16	16	16	.80	.90	1.10	1.30	$1.40	$1.55	$1.70			
7/16	14	14	14	.90	1.00	1.20	1.40	1.50	1.65	1.80			
1/2	*13	*12	12	1.00	1.15	1.30	1.45	1.60	1.75	1.90	$2.05		
9/16	12	12	12	1.10	1.30	1.45	1.55	1.70	1.85	2.05	2.20	$2.35	
5/8	11	11	11	1.20	1.35	1.50	1.60	1.75	1.90	2.10	2.25	2.40	$2.55
11/16	11	11	11	1.30	1.45	1.55	1.70	1.90	2.05	2.20	2.35	2.50	2.65
3/4	10	10	10	1.40	1.50	1.60	1.80	2.00	2.15	2.30	2.45	2.60	2.75
13/16	10	10	10	1.60	1.70	1.80	2.00	2.15	2.30	2.45	2.60	2.75	2.90
7/8	9	9	9	1.80	1.90	2.10	2.30	2.50	2.70	2.90	3.10	3.30	3.50
15/16	9	9	9	2.00	2.10	2.30	2.50	2.70	2.90	3.10	3.30	3.50	3.70
1	8	8	8	2.25	2.30	2.50	2.70	2.90	3.10	3.30	3.50	3.70	3.90

*We also furnish 1/2-inch Pulley Taps with 12 threads to the inch, United States Standard form, and 13 threads to the inch "V" Standard form, at regular list and discount.

"V" form of threads are furnished unless otherwise ordered. All sizes and threads not listed will be considered special and subject to special discounts.

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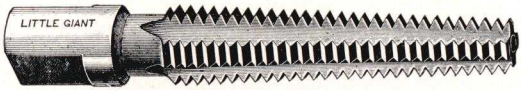
BIT BRACE TAPS.

All Bit Brace Taps are sent even size, "V" Standard, unless otherwise ordered,.

Diameter, Inches	No. of Threads to Inch	Price Each
3/16	24	$0.50
1/4	16, 18, 20	.50
5/16	16, 18	.55
3/8	14, 16	.60
7/16	12, 14	.70
1/2	12, 13	.80

BLACKSMITHS' TAPER TAPS.



Size	NUMBER OF THREADS PER INCH		Price
	Right Hand	Left Hand	
1/8	30, 32		$0.30
3/16	20, 24, 26, 32	24	.30
1/4	16, 18, 20, 22, 24, 26	20	.30
5/16	16, 18, 20, 22	18	.30
3/8	12, 14, 16, 18	16	.35
7/16	12, 14, 16, 18	14	.40
1/2	12, 13, 14, 16	12, 13, 14	.40
9/16	10, 12, 14	12	.50
5/8	10, 11, 12, 14	10, 11, 12	.50
11/16	10, 11	11	.65
3/4	8, 9, 10, 12	10, 12	.65
7/8	8, 9, 10	9	.90
1	7, 8, 9, 10	8, 9	1.25
1 1/8	7, 8	7	1.50
1 1/4	6, 7, 8, 9	7, 8, 9	1.75
1 5/8	7		2.25
1 3/8	6, 7	6	2.50
1 1/2	6, 7, 8	6, 7, 8	3.00
1 5/8	5, 6	5	4.00
1 3/4	5, 6	5, 6	4.50
2	4 1/2	4 1/2	6.00

All sizes and threads not listed are special and subject to special prices.

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TAPPER TAPS.

IN U. S. S. AND "V" FORM.

All orders will be filled with "V" Threads unless otherwise advised.

All sizes, lengths, and threads not listed will be considered special and subject to special prices.

DIAMETER		Length of Thread	NO. OF THREADS TO INCH			WHOLE LENGTH PRICE EACH			
Standard Size	Rough Iron Size		United States Standard	"V" Standard	Whitworth Standard	11 Inch	12 Inch	14 Inch	15 Inch
1/4		1 3/4	20	20	20	$0.70	$0.75	$0.80	$0.90
	17/64	1 3/4	20	20		.70	.75	.80	.90
	9/32	1 3/4	20	20		.70	.75	.80	.90
5/16		2	18	18	18	.80	.85	.90	1.00
	21/64	2	18	18		.80	.85	.90	1.00
	11/32	2	18	18		.80	.85	.90	1.00
3/8		2	16	16	16	.90	.95	1.00	1.10
	25/64	2	16	16		.90	.95	1.00	1.10
	13/32	2	16	16		.90	.95	1.00	1.10
7/16		2 1/4	14	14	14	1.00	1.05	1.15	1.25
	29/64	2 1/4	14	14		1.00	1.05	1.15	1.25
	15/32	2 1/4	14	14		1.00	1.05	1.15	1.25
1/2		2 1/4	*13	*12	12	1.12	1.15	1.25	1.35
	33/64	2 1/4	*13	*12		1.12	1.15	1.25	1.35
	17/32	2 1/4	*13	*12		1.12	1.15	1.25	1.35

*We also furnish in both Even and Rough Iron Sizes, 1/2-inch Tapper Taps with 12 threads to the inch, United States Standard form, and 13 threads to the inch, "V" Standard form, at regular list and discount.

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TAPPER TAPS.

(Continued)

DIAMETER		Length of Thread	NO. OF THREADS TO INCH			WHOLE LENGTH PRICE EACH			
Standard Size	Rough Iron Size		United States Standard	"V" Standard	Whitworth Standard	11 Inch	12 Inch	14 Inch	15 Inch
9/16		2½	12	12	12	$1.30	$1.35	$1.45	$1.55
	37/64	2½	12	12		1.30	1.35	1.45	1.55
	19/32	2½	12	12		1.30	1.35	1.45	1.55
5/8		2½	11	11	11	1.45	1.50	1.65	1.75
	41/64	2½	11	11		1.45	1.50	1.65	1.75
	21/32	2½	11	11		1.45	1.50	1.65	1.75
11/16		2½	11	11	11	1.62	1.70	1.80	1.95
	23/32	2½	11	11		1.62	1.70	1.80	1.95
3/4		2¾	10	10	10	1.80	1.85	2.00	2.10
	25/32	2¾	10	10		1.80	1.85	2.00	2.10
13/16		2¾	10	10	10	2.05	2.10	2.25	2.35
	27/32	2¾	10	10		2.05	2.10	2.25	2.35
7/8		3	9	9	9	2.35	2.45	2.60	2.75
	29/32	3	9	9		2.35	2.45	2.60	2.75
15/16		3	9	9	9	2.70	2.75	3.00	3.15
	31/32	3	9	9		2.70	2.75	3.00	3.15
1		3½	8	8	8	3.15	3.20	3.50	3.65
	1 1/32	3½	8	8		3.15	3.20	3.50	3.65

TAPPER TAPS.

(Concluded)

DIAMETER		NO. OF THREADS TO INCH				WHOLE LENGTH, PRICE EACH			
Standard-Size	Rough Iron Size	Length of Thread	United States Standard	"V" Standard	Whitworth Standard	11 Inch	12 Inch	14 Inch	15 Inch
1⅛		3½	7	7	7	$3.60	$3.70	$3.95	$4.10
	1 5/32	3½	7	7		3.60	3.70	3.95	4.10
1¼		3½	7	7	7	4.15	4.25	4.50	4.65
	1 9/32	3½	7	7		4.15	4.25	4.50	4.65
1⅜		4	6	6	6	4.70	4.80	5.05	5.20
	1 13/32	4	6	6		4.70	4.80	5.05	5.20
1½		4	6	6	6	5.30	5.40	5.65	5.80
	1 17/32	4	6	6		5.30	5.40	5.65	5.80
1⅝		4½	5½	5	5	5.10	5.25	5.40	5.55
	1 21/32	4½	5½	5	5	5.10	5.25	5.40	5.55
1¾		4¾	5	5	5	5.60	5.85	6.00	6.15
	1 25/32	4¾	5	5	5	5.60	5.85	6.00	6.15
1⅞		5	5	4½	4½	6.50	6.65	6.80	6.95
	1 29/32	5	5	4½	4½	6.50	6.65	6.80	6.95
2		5	4½	4½	4½	7.25	7.40	7.55	7.70
	2 1/32	5	4½	4½	4½	7.25	7.40	7.55	7.70

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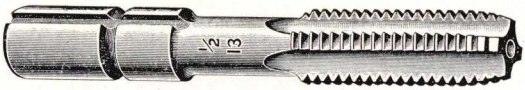
TAPS FOR BEAMAN & SMITH HOLDERS.



FITTING NO. 1 HOLDER			FITTING NO. 2 HOLDER		
Diameter Inches	Number of Threads to Inch	Price Each	Diameter Inches	Number of Threads to Inch	Price Each
1/4	20	$0.45	5/8	11	$0.90
5/16	18	.50	11/16	11	1.05
3/8	16	.55	3/4	10	1.20
7/16	14	.60	13/16	10	1.40
1/2	12	.70	7/8	9	1.60
9/16	12	.80	15/16	9	1.80
5/8	11	.90	1	8	2.00
			1 1/8	7	2.25
			1 1/4	7	2.60

Prices on Taps fitting No. 2½ and No. 3 Holders given on application.

These Taps are used in the Beaman & Smith Patent Safety Drill and Tap Holders.

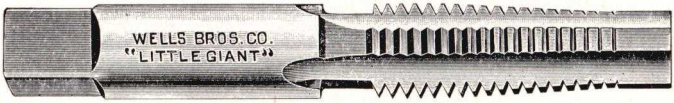
These Taps will be sent with "V" threads unless a different thread is called for on the order. Threads or sizes not on above list will be considered special and sold at special prices, which will be furnished on application.

STOVE BOLT.

These Taps are made to correspond in sizes and threads to the American Screw Company's stove bolts. Other sizes and threads will be charged as special. Less than six Taps of a size will be charged at rate of single Taps.

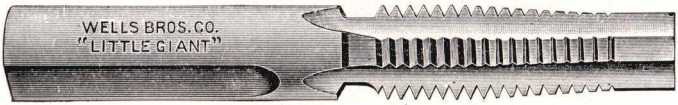
Sizes	Price Each	Per Doz.	No. of Threads	Sizes	Price Each	Per Doz.	No. of Threads
5/32	$0.35	$4.00	28	1/4	$0.38	$4.40	18
3/16	.35	4.00	24	5/16	.38	4.40	18
7/32	.35	4.00	22	3/8	.45	5.30	16

HORSE SHOE TAPS.



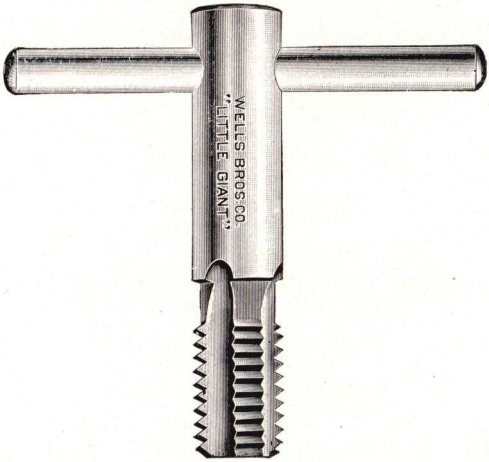
HAND HORSE SHOE TAP.

This is the most generally used and unless otherwise ordered will be sent on all orders. It is made along similar lines of the regular Machinist Hand Tap, except with a larger shank. To be used with a Tap Wrench.



TAPPER HORSE SHOE TAP.

This Tap is made with a ½ inch diameter shank, flatted on one side, for use in Drilling Machine.



STUB HORSE SHOE TAP.

This Tap is made for use by hand, it having a small handle running through the shank of the Tap.

We recommend the Hand Tap and unless otherwise ordered will always send that style.

HORSE SHOE CALK TAPS.

There is on the market several different styles of patent horse-shoes with interchangeable calks.

All, or at least a majority of these, are put into the shoe by the use of taps.

These taps are all furnished with United States form of thread, but not the United States Standard number of threads.

The Taps are made with a guide point so as to start them straight.

These taps are furnished in the hand style shown first on opposite page unless otherwise ordered. We are also prepared to furnish "Tapper" which is the same style tap with ½" shank, also "Stub" which is a T handle tap.

PRICE LIST OF HORSE SHOE CALK TAPS.

Size	No. of Threads per inch	Price List Each	Price List Per Doz.
5/16	18	$0.50	$6.00
3/8	18	.55	6.60
7/16	16	.60	7.20
1/2	14	.70	8.40
9/16	12	.80	9.60
5/8	12	.90	10.80

STAY BOLT TAPS.

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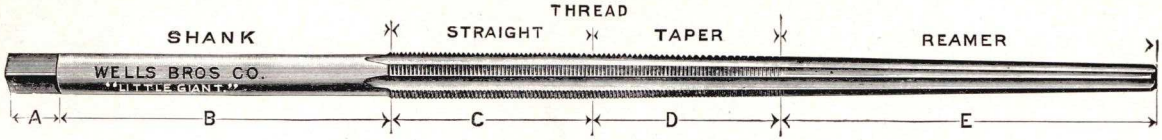


Diameter, inches	PRICE EACH											
	16 in.	18 in.	21 in.	24 in.	27 in.	30 in.	33 in.	36 in.	39 in.	42 in.	48 in.	54 in.
3/4, 13/16, 7/8	$5.60	$7.20	$8.00	$8.80	$10.90	$13.00	$14.00	$15.00	$16.50	$18.00	$19.00	$20.00
15/16, 1	6.60	8.50	9.35	10.20	12.25	14.25	15.40	16.50	18.00	19.75	21.00	22.25
1 1/16, 1 1/8	7.60	9.50	10.35	11.20	13.25	15.25	16.40	17.50	20.00	22.00	23.50	25.00
1 3/16, 1 1/4	9.00	10.50	12.00	12.75	14.75	16.50	18.00	19.50	22.00	24.00	25.50	27.00
1 5/16, 1 3/8	11.00	12.50	14.00	15.00	17.00	18.50	20.00	21.50	24.00	26.00	28.00	30.00
1 7/16, 1 1/2	13.00	14.50	16.00	17.00	19.00	20.00	22.00	23.50	26.00	28.00	30.00	32.00

READ THIS AS IT IS IMPORTANT.

All orders for these taps should give exact diameter and number of threads per inch, also length of parts A, B, C, D, and E.

Stay Bolt Taps with 10, 11, 12 and 13 Threads in either "V" or U. S. S. Threads furnished at regular prices. However, 12 is the regular number and Taps are *always* furnished with this number unless otherwise ordered.

We carry in stock taps 3/4, 7/8, and 1 inch diameter, twelve threads to the inch, 16, 18, 24, 30, 36, and 42 inches long. These taps are proportioned as follows: *One-third* shank, *one-sixth* straight thread, *one-sixth* taper thread, *one-third* reamer. Other proportions, lengths and sizes furnished on orders, with dispatch. If not in immediate need, send for our prices for future reference.

Little Giant.

SPINDLE STAY BOLT TAPS.

Length of Spindle, Inches	Diameter of Spindle, Inches	Total Length Inches	Length of Unfluted Thread, Inches	Length of Fluted Thread Inches	Price Each Including Spindle	Diameter of Tap Inches
11	3/8	7 5/8	2 3/4	3 1/4	$8.00	3/4
11	3/8	7 5/8	2 3/4	3 1/4	8.50	13/16
11	3/8	7 5/8	2 3/4	3 1/4	9.00	7/8
11	3/8	7 5/8	2 3/4	3 1/4	9.50	15/16
11	3/8	7 5/8	2 3/4	3 1/4	10.00	1
11	3/8	7 5/8	2 3/4	3 1/4	10.50	1 1/16
11	3/8	7 5/8	2 3/4	3 1/4	11.00	1 1/8
11	3/8	7 5/8	2 3/4	3 1/4	11.50	1 3/16
11	3/8	7 5/8	2 3/4	3 1/4	12.00	1 1/4
11	3/8	7 5/8	2 3/4	3 1/4	12.25	1 5/16
11	3/8	7 5/8	2 3/4	3 1/4	12.50	1 3/8
11	3/8	7 5/8	2 3/4	3 1/4	12.75	1 7/16
11	3/8	7 5/8	2 3/4	3 1/4	13.00	1 1/2

These taps are used for retapping holes from inside of fire box of locomotive.

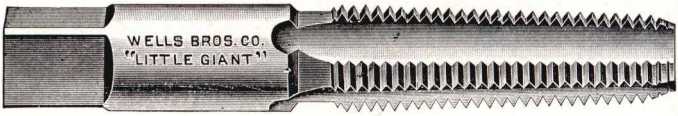
We furnish "V" form of thread, 12 to the inch, unless otherwise specified.

Other sizes furnished to order at special prices.

Little Giant.

TAPER BOILER TAPS.

12 "V" THREADS TO THE INCH.



Diameter Inches	Price Each	Length Over All Inches	No. Threads to Inch
1/2	$1.00	3 3/4	12
9/16	1.15	4	12
5/8	1.30	4 1/4	12
11/16	1.45	4 1/2	12
3/4	1.60	4 3/4	12
13/16	1.80	5	12
7/8	2.10	5 1/4	12
15/16	2.40	5 1/2	12
1	2.80	5 3/4	12
1 1/16	3.00	5 3/4	12
1 1/8	3.20	6	12
1 3/16	3.40	6	12
1 1/4	3.70	6 1/4	12
1 5/16	4.00	6 1/4	12
1 3/8	4.30	6 1/2	12
1 7/16	4.60	6 1/2	12
1 1/2	4.90	6 1/2	12
1 5/8	5.10	6 1/2	12
1 3/4	5.40	6 1/2	12
1 7/8	5.70	6 3/4	12
2	6.00	6 3/4	12
2 1/8	6.50	6 3/4	12
2 1/4	7.00	6 3/4	12
2 3/8	7.50	6 3/4	12
2 1/2	8.00	6 3/4	12

These Taps are slightly Tapered to make a steam tight fit. Diamter given is size of Tap about 5/8 inch from large end of thread.

Taps will be furnished 1/32 oversize.

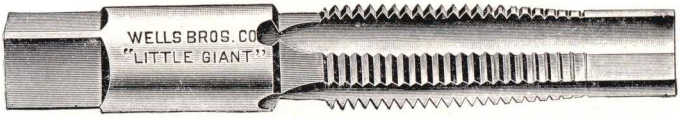
All orders will be filled with V threads.

Other sizes and threads will be charged as special.

Little Giant.

STRAIGHT BOILER TAPS.

12 "V" THREADS TO THE INCH.



Diameter Inches	Price Each	Length over All Inches	No. of Threads Per Inch
1/2	$1.00	3 3/4	12
9/16	1.15	4	12
5/8	1.30	4 1/4	12
11/16	1.45	4 1/2	12
3/4	1.60	4 3/4	12
13/16	1.80	5	12
7/8	2.10	5 1/4	12
15/16	2.40	5 1/2	12
1	2.80	5 3/4	12
1 1/16	3.00	5 3/4	12
1 1/8	3.20	6	12
1 3/16	3.40	6	12
1 1/4	3.70	6 1/4	12
1 5/16	4.00	6 1/4	12
1 3/8	4.30	6 1/2	12
1 7/16	4.60	6 1/2	12
1 1/2	4.90	6 1/2	12
1 5/8	5.10	6 1/2	12
1 3/4	5.40	6 1/2	12
1 7/8	5.70	6 3/4	12
2	6.00	6 3/4	12
2 1/8	6.50	6 3/4	12
2 1/4	7.00	6 3/4	12
2 3/8	7.50	6 3/4	12
2 1/2	8.00	6 3/4	12

The full thread of above Taps is straight. The reamer at point is used to size the hole and serves as a gauge for size of drill to be used before Tapping.

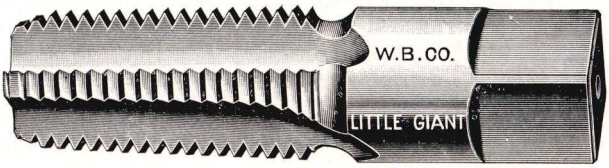
These Taps will be furnished 1/32 oversize.

All orders will be filled with "V" threads. Other sizes and threads will be charged special.

Little Giant.

SHORT PATCH BOLT TAPS.

12 "V" THREADS PER INCH.



Short Patch Bolt Taps are furnished as illustrated.

These Taps are slightly tapered to make a steam-tight fit.

Size given is size of Tap at about 5/8 inch from large end of thread.

LIST OF SIZES AND PRICES.

Sizes	Length Over All, Inches	No. of Threads	Price	Sizes	Length Over All, Inches	No. of Threads	Price
1/2	3	12	$0.70	13/16	3	12	$1.40
9/16	3	12	.80	7/8	3	12	1.60
5/8	3	12	.90	15/16	3	12	1.80
11/16	3	12	1.05	1	3	12	2.00
3/4	3	12	1.20	1 1/8	3	12	2.25
				1 1/4	3	12	2.60

Sharp "V" Threads are sent on all orders.

Rough iron sizes furnished at regular prices.

Little Giant.

TAPS.

TAPER, PLUG OR BOTTOMING

HAVING GROOVED SHANKS TO BE USED IN CHUCKS WITH GROOVED JAWS.

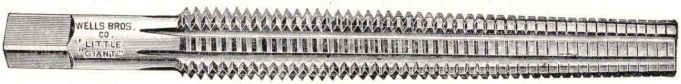
LIST OF SIZES AND PRICES.

Diameter	No. of Threads to Inch	Price Each
3/16	24, 32	$0.35
1/4	20,	.45
5/16	18,	.50
3/8	16	.55
7/16	14	.60
1/2	12, 13	.70
9/16	12	.80
5/8	11	.90
11/16	11	1.05
3/4	10	1.20
13/16	10	1.40
7/8	9	1.60
15/16	9	1.80
1	8	2.00
1 1/8	7	2.25
1 1/4	7	2.60
1 3/8	6	3.00
1 1/2	6	3.50
1 5/8	5, 5 1/2	4.20
1 3/4	5	5.00
1 7/8	4, 4 1/2	5.80
2	4 1/2	6.70

Regular pitch and form of the "V" Thread will be sent unless otherwise specified. U. S. S. and Whitworth forms furnished at same list price.

Little Giant

LONG TAPER HOB OR MASTER TAPS, FOR SOLID DIES.



These "Long Hob Taps" are mostly used for cutting Solid Bolt Dies.

All orders will be filled with "V" Standard Threads, exact size, unless otherwise specified.

Exact or Rough Iron Sizes in Standard "V", United States Standard and Whitworth Threads at regular list and discount.

All sizes, lengths and threads not listed will be considered special and subject to special prices.

Diameter	Total Length Inches	NO. OF THREADS TO INCH				Price Each
		United States Standard	"V" Standard	Whitworth Standard	"V" Threads also Furnished	
1/4	3 1/2	20	20	20		$0.75
5/16	4	18	18	18		.87
3/8	4 1/2	16	16	16	14	1.00
7/16	5	14	14	14	16	1.12
1/2	5 1/2	*13	12	12	13, 14	1.25
9/16	6	12	12	12		1.44
5/8	6 1/2	11	11	11	10, 12	1.62
11/16	7	11	11	11	12	1.81
3/4	7 1/2	10	10	10		2.00
13/16	8	10	10	10		2.25
7/8	8 1/2	9	9	9		2.62
15/16	8 3/4	9	9	9		3.00
1	9	8	8	8		3.50
1 1/8	9 1/4	7	7	7	8	4.00
1 1/4	9 1/2	7	7	7		4.62
1 3/8	9 3/4	6	6	6		5.25
1 1/2	10	6	6	6		5.87
1 5/8	10 1/4	5 1/2	5	5		6.62
1 3/4	10 1/2	5	5	5		7.50
1 7/8	10 3/4	5	4 1/2	4 1/2		8.50
2	11	4 1/2	4 1/2	4 1/2		9.62

*We also furnish, at same list price and discount, 1/2-inch Hob Taps with 12 threads to the inch, United States Standard form.

Little Giant.

SHORT PLUG HOB TAPS, FOR OPEN DIES.

These Hobs are intended for cutting Open Dies.

All orders will be filled with "V" Standard Threads, exact size, unless otherwise specified

Exact or Rough Iron Sizes in Standard "V", United States Standard, and Whitworth Threads furnished at regular prices.

All sizes, lengths and threads not listed will be considered special and subject to special prices.

Diameter	Total Length Inches	NO. OF THREADS TO INCH				Price Each
		United States Standard	"V" Standard	Whitworth Standard	"V" Threads also Furnished	
1/4	2 3/4	20	20	20		$0.60
5/16	3 1/8	18	18	18		.70
3/8	3 1/2	16	16	16	14	.80
7/16	3 3/4	14	14	14	16	.90
1/2	4	*13	12	12	13, 14	1.00
9/16	4 1/4	12	12	12		1.15
5/8	4 1/2	11	11	11	10, 12	1.30
11/16	4 3/4	11	11	11	12	1.45
3/4	5	10	10	10		1.60
13/16	5 1/4	10	10	10		1.80
7/8	5 1/2	9	9	9		2.10
15/16	5 3/4	9	9	9		2.40
1	6	8	8	8		2.80
1 1/8	6 1/4	7	7	7	8	3.20
1 1/4	6 3/4	7	7	7		3.70
1 3/8	7	6	6	6		4.20
1 1/2	7 1/4	6	6	6		4.70
1 5/8	8	5 1/2	5	5		5.30
1 3/4	8 1/2	5	5	5		6.00
1 7/8	9	5	4 1/2	4 1/2		6.80
2	9 1/2	4 1/2	4 1/2	4 1/2		7.70

*We also furnish, at regular list and discount, 1/2-inch Hob Taps with 12 threads to the inch, United States Standard form.

Little Giant.

SELLER'S HOB TAPS.

All orders will be filled with "V" Standard Threads, exact size, unless otherwise advised.

All sizes, lengths and threads not listed will be considered special and subject to special prices.

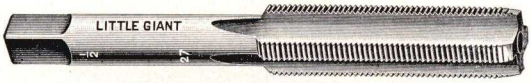
Diameter Inches	Length Over All	NO OF THREADS TO INCH			Price Each
		United States Standard	"V" Standard	Whitworth Standard	
1/4	4 1/4	20	20	20	$0.90
5/16	4 1/2	18	18	18	1.05
3/8	5	16	16	16	1.20
7/16	5 1/4	14	14	14	1.35
1/2	5 3/4	*13	*12	12	1.50
9/16	6	12	12	12	1.75
5/8	6 1/2	11	11	11	1.95
11/16	7	11	11	11	2.20
3/4	7 1/2	10	10	10	2.40
13/16	8	10	10	10	2.70
7/8	8 1/2	9	9	9	3.15
15/16	9	9	9	9	3.60
1	9 1/2	8	8	8	4.20
1 1/8	9 3/4	7	7	7	4.80
1 1/4	10	7	7	7	5.55
1 3/8	10 1/2	6	6	6	6.30
1 1/2	11	6	6	6	7.05
1 5/8	11 1/2	5 1/2	5	5	7.95
1 3/4	12	5	5	5	9.00
1 7/8	12 1/2	5	4 1/2	4 1/2	10.20
2	13	4 1/2	4 1/2	4 1/2	11.55

*We also furnish 1/2-inch Seller's Hob Taps with 12 threads to the inch, United States Standard form, and 13 threads to the inch, "V" Standard form, at regular list and discount.

Little Giant.

BRAZED BRASS TUBING TAPS.

RIGHT OR LEFT HAND.



Sizes	Prices	Threads	Sizes	Prices	Threads
1/4	$0.45	27	5/8	$0.90	27
5/16	.50	27	3/4	1.20	27
3/8	.55	27	7/8	1.60	27
7/16	.60	27	1	2.00	27
1/2	.70	27			

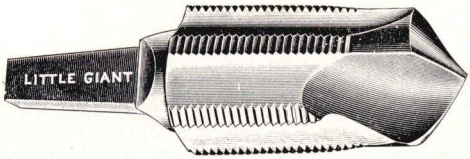
These taps are also furnished with English Standard (which is 26 threads per inch) when so ordered.

These taps cut a straight thread. Right-hand sent unless otherwise ordered.

For list of Screw Plates with above style of Taps, see pages 56.

COMBINED PIPE TAP AND DRILL.

FOR TAPPING GAS AND WATER PIPES.



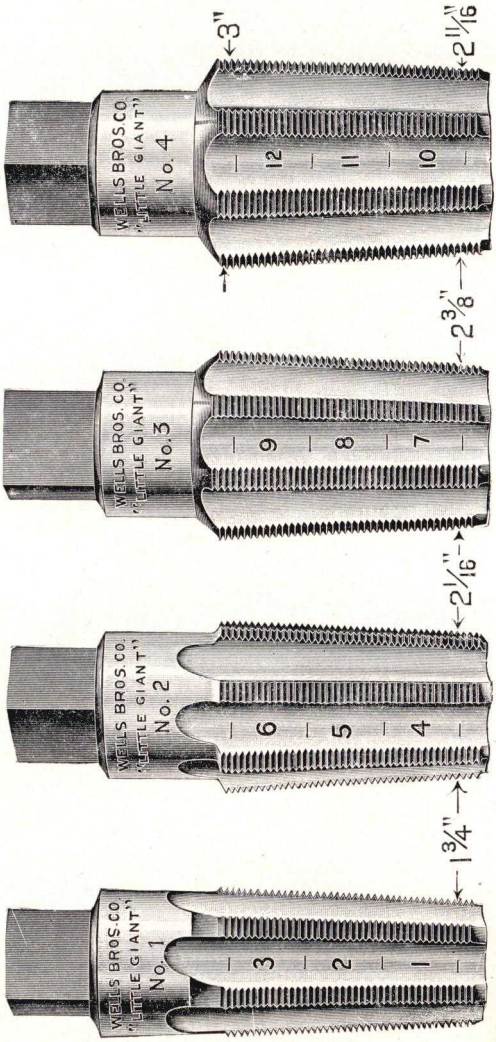
Sizes	Length	Price Each	Sizes	Length	Price Each
1/4	3 3/4	$1.50	1 1/4	5	$4.80
3/8	4	1.75	1 1/2	5 1/2	5.80
1/2	4 1/4	2.20	2	5 3/4	7.60
3/4	4 1/2	3.00	2 1/2	6 1/2	10.00
1	4 3/4	3.80			

Shanks for sizes 1/4 to 1 1/2 inches are 11/16 inch by 1/2 inch, and 1 3/4 inches long.

Shanks for sizes 2 and 2 1/2 inches are 1 inch by 3/4 inch, and 2 inches long.

Little Giant.

MUD PLUG OR WASHOUT TAPS



MUD PLUG OR WASHOUT TAPS.

Used for tapping washout holes in locomotives. A set consists of four taps having 1¼″ taper in twelve inches.

Tap No 1 is 1¾ inches in diameter at small end and tap No. 4 is 3 inches in diameter at large end.

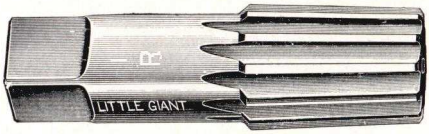
The taps are marked as shown in illustrations and correspond with taper plugs bearing the same numbers as the twelve diameters shown in the four taps. The taps are 6½″ long and all have the same size shank square.

PRICE EACH

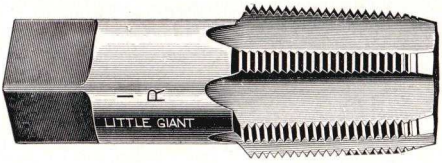
No. 1—	1¾ to 2 1/16	**$6.00**
No. 2—	2 1/16 to 2⅜	**7.50**
No. 3—	2⅜ to 2 11/16	**9.00**
No. 4—	2 11/16 to 3″	**10.50**

These Taps will be furnished with "V" form thread 12 to the inch unless otherwise ordered.

PIPE TAPS AND REAMERS



Pipe Reamers



Pipe Taps

PRICES OF PIPE TAPS AND REAMERS

Sizes	1/8 in.	1/4 in.	3/8 in.	1/2 in.	3/4 in.
Prices	$1.12	$1.25	$1.50	$1.87	$2.50
Sizes	1 in.	1 1/4 in.	1 1/2 in.	2 in.	
Prices	$3.12	$3.75	$4.62	$6.25	

These Taps are Machine Relieved.

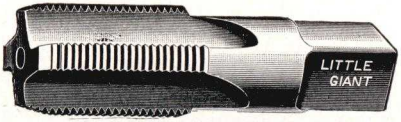
We always send Pipe Taps with Right-hand Threads, unless order calls for Left-hand. Left-hand Threads same price.

Taps with Whitworth Threads furnished at same list price.

For sizes larger than 2-inch, see list and prices page 138.

Little Giant.

STRAIGHT PIPE TAPS



LIST OF SIZES AND PRICES.

Sizes.....	1/8 in.	1/4 in.	3/8 in.	1/2 in.	3/4 in.
Prices	$1.12	$1.25	$1.50	$1.87	$2.50
Sizes	1 in.	1 1/4 in.	1 1/2 in.	2 in.	
Prices	$3.12	$3.75	$4.62	$6.25	

These Taps are straight in threaded part, not tapering as in an ordinary Pipe Tap. Are made of best quality of steel.

We always send Pipe Taps with Right-hand Threads, unless order calls for Left-hand. Left-hand Threads, same price. For sizes larger than 2-inch, see list and prices, page 138.

PIPE HOB TAPS.

LIST OF SIZES AND PRICES.

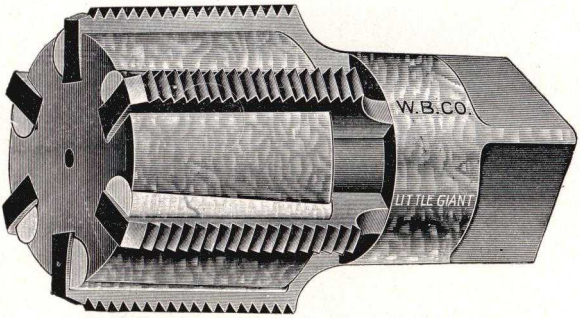
Sizes	1/8 in.	1/4 in.	3/8 in.	1/2 in.	3/4 in.	1 in.	1 1/4 in.
Prices	$1.12	$1.25	$1.50	$1.87	$2.50	$3.12	$3.75
Sizes	1 1/2 in.	2 in.	2 1/2 in.	3 in.	3 1/2 in.	4 in.	
Prices	$4.62	$6.25	$10.50	$15.00	$42.00	$50.00	

Right-hand Taps will be sent, unless otherwise ordered. Left hand Taps, same price.

Little Giant.

INSERTED LANDS, PIPE TAPS AND REAMERS.

(PATENTED.)



We illustrate above the latest way in which we furnish all Pipe Taps and Reamers 2½ inches and larger.

In the course of perfecting our inserted lands tap, we have manufactured several different styles. We have patented the present style tap and feel sure it will commend itself to all.

The small parts of these taps can be tempered better than the larger piece and a much higher grade of steel can be used.

The tap or reamer can be kept in better condition, as the lands can be ground more easily than the solid style.

All parts are replaceable so it makes the taps cheaper than others as it does not necessitate the purchase of an entire new tap.

We make all our Pipe Taps and Reamers 2½ inches to 10 inches diameter of this style.

We carry these in stock both in Briggs Standard and Whitworth threads.

LIST PRICES PIPE TAPS AND REAMERS.

Size	2½	3	3½	4	4½	5
Price Tap	$6.00	$8.00	$10.00	$14.00	$25.00	$35.00
" Reamer	6.00	8.00	10.00	14.00	25.00	35.00
" Per Set Lands	2.00	2.00	2.50	2.50	3.00	3.00
Size	6	7	8	9	10	
Price Tap	$50.00	$70.00	$85.00	$100.00	$120.00	
" Reamer	50.00	70.00	85.00	100.00	120.00	
" Per Set Lands	5.00	5.00	7.00	7.00	7.00	

For sizes smaller than 2½ inch see list and prices pages 136 and 137.

When ordering new Lands for these Taps give cutting size.

Little Giant.

TAPS AND TAP WRENCHES.

For the convenient use of machinists, we are now prepared to furnish complete sets of MACHINISTS' HAND TAPS in assortments, as listed below. Each set contains:

Taper, Plug and Bottoming Taps: also Adjustable Tap Wrench,

put up in case as shown, making a convenient place for each tool. We put these sets up "V" form of thread, EXACT SIZES, unless otherwise ordered. U. S. S. or WHITWORTH forms of thread, exact or rough iron sizes, furnished at same prices.

139

Assortment. No. 5.

Price

Contains Tap Wrench No. 5, 10½ inches long, one each Taper, Plug, and Bottoming. Taps, $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, (15 taps). Complete in case **$6.50**

Assortment No. 6.

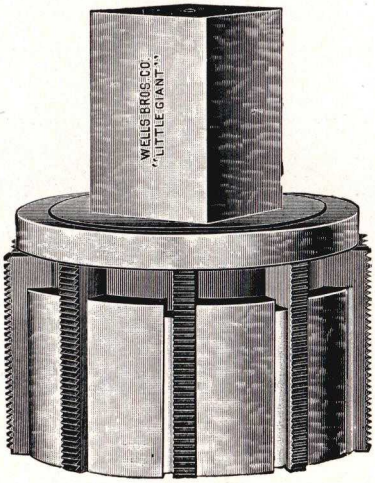
As shown above contains Tap Wrench No. 6, 15 inches long, one each Taper, Plug, and Bottoming Taps, $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$ (21 taps). Complete in case..... **10.00**

Assortment No. 7.

Contains Tap Wrench No. 7, 20 inches long, one each Taper, Plug, and Bottoming Taps, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8}, (21 taps). Complete in case **16.00**

For price list of Tap Wrenches as furnished with these assortments see page 215.

SPECIAL INSERTED LANDS TAPS.



The above is cut of a special large diameter tap. We have made several of these and in all cases they have proved satisfactory.

They are made with inserted lands similar in style to our inserted lands pipe tap shown on page 138.

The valuable feature of this tap is that when the threads are worn new lands can be bought without buying an entire new tap.

Prices quoted on application.

SECTION VI

PAGES 141 TO 152.

REAMERS.

BIT BRACE TAPER.

STRAIGHT SHANK.

$\frac{1}{2}''$ and $\frac{41}{64}''$ SHANK.

BURRING.

TAPER PIN.

COUNTERSINKS.

CENTRE.

Little Giant.

BIT BRACE TAPER REAMERS

SPIRAL FLUTE.

Size	Price Each.	Length Over All Inches	Length Flute Inches
1/8	$0.35	3 3/4	1 5/8
3/16	.35	3 7/8	1 3/4
1/4	.45	4	1 7/8
5/16	.50	4 1/8	2
3/8	.55	4 1/4	2 1/8
7/16	.60	4 3/8	2 1/4
1/2	.70	4 1/2	2 3/8
9/16	.80	4 5/8	2 1/2
5/8	.90	4 3/4	2 5/8
11/16	1.05	4 7/8	2 3/4
3/4	1.20	5	2 7/8
13/16	1.40	5 1/8	3
7/8	1.60	5 1/4	3 1/8
15/16	1.80	5 3/8	3 1/4
1	2.00	5 1/2	3 3/8
1 1/16	2.15	5 5/8	3 1/2
1 1/8	2.25	5 3/4	3 5/8
1 3/16	2.45	5 7/8	3 3/4
1 1/4	2.60	6	3 7/8
1 5/16	2.80	6 1/8	4
1 3/8	3.00	6 1/4	4 1/8
1 7/16	3.25	6 3/8	4 1/4
1 1/2	3.50	6 1/2	4 3/8

These Reamers are intended for reaming out and making true smooth holes in wood or iron.

Each Reamer at the largest cutting diameter is approximately 1/16 inch larger than the size stamped on shank. Each Reamer tapers one-eighth of an inch and follows from the smallest to the largest. So that with a set of these Reamers any size 1/8 to 1 1/2 can be made.

The quality and finish will be found of the very best.

Spiral or Straight Flute sent at same prices. Unless otherwise ordered Spiral Flute will be sent.

For Straight Shank see page 144.

Little Giant.

BIT STOCK REAMERS IN SETS.

SPIRAL FLUTE.

These Reamers are well made and when properly used will do a large amount of work.

Assortment No. 5.

Set of five Reamers $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, in case **$3.00**

Assortment No. 55.

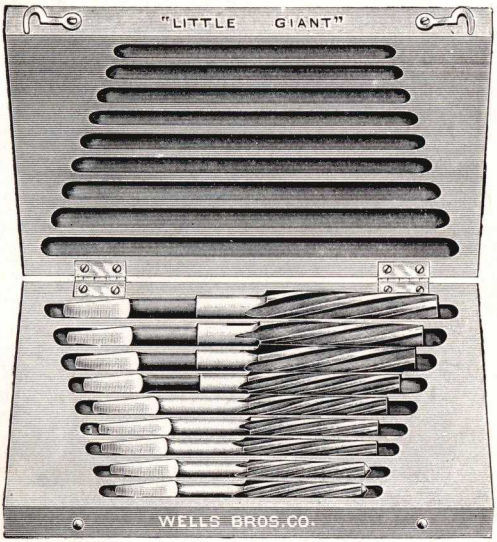
Set of five Reamers $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, without case..... **$2.80**

Assortment No. 9

Set of nine Reamers $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{9}{16}$, $\frac{5}{8}$, $\frac{11}{16}$, $\frac{3}{4}$, in case **$7.00**

Assortment No. 99

Set of nine Reamers $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{9}{16}$, $\frac{5}{8}$, $\frac{11}{16}$, $\frac{3}{4}$ without case..... **$6.75**



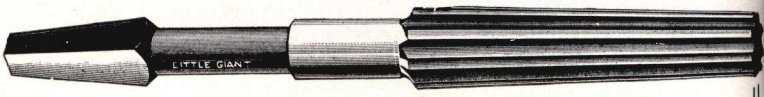
For prices on these Reamers separately, see page 142.

Unless otherwise ordered Bit Brace Reamers will be sent with Spiral Flutes as shown above.

Straight Fluted Reamers sent at same prices, for list see pages 144 and 145.

Little Giant.

BIT BRACE TAPER REAMERS.



STRAIGHT FLUTE.

Size	Price Each	Length Over All, Inches	Length Flute Inches.
1/8	$0.35	3 3/4	1 5/8
3/16	.35	3 7/8	1 3/4
1/4	.45	4	1 7/8
5/16	.50	4 1/8	2
3/8	.55	4 1/4	2 1/8
7/16	.60	4 3/8	2 1/4
1/2	.70	4 1/2	2 3/8
9/16	.80	4 5/8	2 1/2
5/8	.90	4 3/4	2 5/8
11/16	1.05	4 7/8	2 3/4
3/4	1.20	5	2 7/8
13/16	1.40	5 1/8	3
7/8	1.60	5 1/4	3 1/8
15/16	1.80	5 3/8	3 1/4
1	2.00	5 1/2	3 3/8
1 1/16	2.15	5 5/8	3 1/2
1 1/8	2.25	5 3/4	3 5/8
1 3/16	2.45	5 7/8	3 3/4
1 1/4	2.60	6	3 7/8
1 5/16	2.80	6 1/8	4
1 3/8	3.00	6 1/4	4 1/8
1 7/16	3.25	6 3/8	4 1/4
1 1/2	3.50	6 1/2	4 3/8

These Reamers are intended for reaming out and making true, smooth holes in wood or iron.

Each Reamer at the largest cutting diameter is approximately 1/16 inch larger than the size stamped on shank. Each Reamer tapers one-eighth of an inch and follows from the smallest to the largest, so that with a set of these Reamers any size 1/8″ to 1 1/2″ can be made.

The quality and finish will be found of the very best.

Little Giant.

BIT STOCK REAMER IN SETS.

STRAIGHT FLUTE.

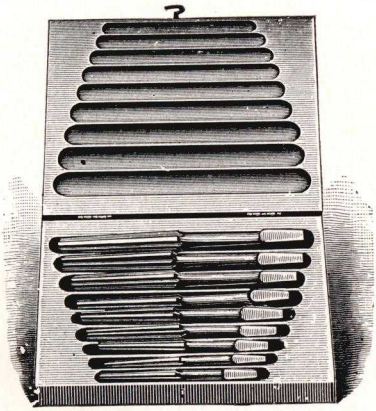
These Reamers are well made and when properly used will do a large amount of work.

Assortment No. 15.

Set of five Reamers $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, in case **$3.00**

Assortment No. 155.

Set of five Reamers $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, without case **$2.80**



Assortment No. 19.

Set of nine Reamers $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{9}{16}$, $\frac{5}{8}$, $\frac{11}{16}$, $\frac{3}{4}$, in case... **$7.00**

Assortment No. 199.

Set of nine Reamers $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{9}{16}$, $\frac{5}{8}$, $\frac{11}{16}$, $\frac{3}{4}$, without case **$6.75**

For prices on these Reamers separately, see page 144.

Little Giant.

TAPER REAMERS.

SPIRAL FLUTED.

WITH STRAIGHT SHANKS.

Nominal Size Inches	Price Each	Length Over All, Inches	Length Flute, Inches
1/4	$0.45	4	2
5/16	.50	4 1/4	2 1/8
3/8	.55	4 1/2	2 1/4
7/16	.60	4 3/4	2 3/8
1/2	.70	5	2 1/2
9/16	.80	5 1/4	2 5/8
5/8	.90	5 1/2	2 3/4
11/16	1.05	5 3/4	2 7/8
3/4	1.20	6	3
13/16	1.40	6 1/4	3 1/8
7/8	1.60	6 1/2	3 1/4
15/16	1.80	7	3 1/2
1	2.00	7 1/2	3 3/4
1 1/16	2.15	7 1/2	3 3/4
1 1/8	2.25	8	4
1 3/16	2.45	8	4
1 1/4	2.60	8 1/2	4 1/4
1 5/16	2.80	8 1/2	4 1/4
1 3/8	3.00	9	4 1/2
1 7/16	3.25	9	4 1/2
1 1/2	3.50	9	4 1/2

Wood Cases, holding 1/4 to 1/2 inch inclusive (5 sizes).... **$0.20**
Wood Cases, holding 1/4 to 3/4 inch inclusive (9 sizes).... **.40**

Little Giant

TAPER REAMERS.

SPIRAL FLUTED.

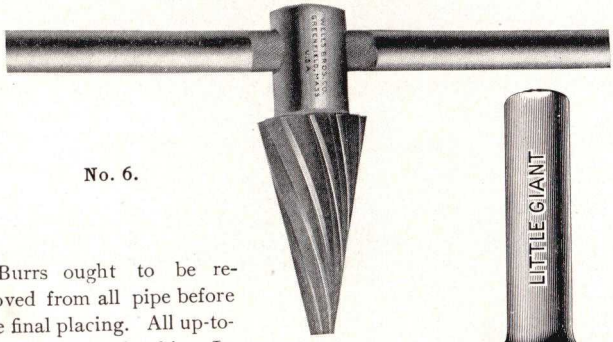
WITH SHANKS 1/2 AND 41/64 INCH DIAMETER.

Nominal Size Inches	Price Each	Length Over All Inches	Length Flute Inches
1/4	$0.45	4 3/4	2
5/16	.50	4 7/8	2 1/8
3/8	.55	5	2 1/4
7/16	.60	5 1/8	2 3/8
1/2	.70	5 1/4	2 1/2
9/16	.80	5 1/2	2 5/8
5/8	.90	5 1/2	2 3/4
11/16	1.05	5 3/4	2 7/8
3/4	1.20	6	3
13/16	1.40	6 1/4	3 1/8
7/8	1.60	6 1/2	3 1/4
15/16	1.80	7 1/8	3 1/2
1	2.00	7 1/2	3 3/4
1 1/16	2.15	7 1/2	3 3/4
1 1/8	2.25	8	4
1 3/16	2.45	8	4
1 1/4	2.60	8 1/2	4 1/4
1 5/16	2.80	8 1/2	4 1/4
1 3/8	3.00	9	4 1/2
1 7/16	3.25	9	4 1/2
1 1/2	3.50	9	4 1/2

Wood Cases, holding 1/4 to 1/2 inch inclusive (5 sizes) **$0.20**
Wood Cases, holding 1/4 to 3/4 inch inclusive (9 sizes) . . . . **.40**

Little Giant.

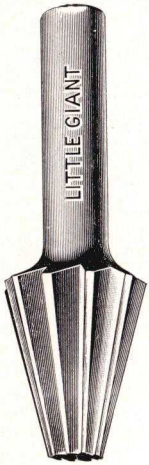
BURRING REAMERS.



No. 6.

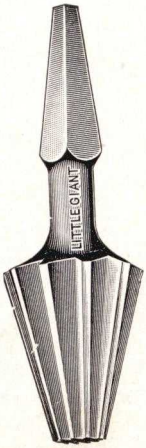
Burrs ought to be removed from all pipe before the final placing. All up-to-date plumbers do this. In some cities it is necessary by law.

There is no better means of removing these burrs than by using one of these Burring Reamers.



No. 2.

No. 2.



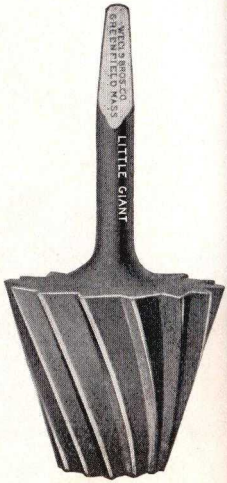
No. 2.

WE RECOMMEND
THE
SPIRAL FLUTED REAMERS

and unless otherwise ordered they will always be sent.

The Spiral Flutes prevent the tool from binding. They make a clean even cut.

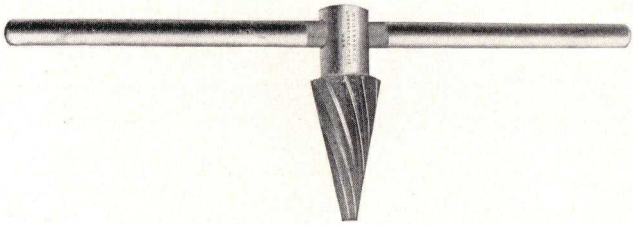
List of sizes, capacities, prices, etc., on opposite page.



No. 5.

Little Giant

BURRING REAMERS.

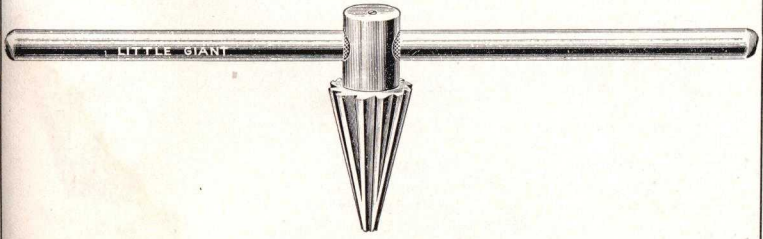


LIST OF SIZES.

Order by this No.	Total Length	Length of Flute	Length of Shank	Size at Point	Size at Large End	Style of Shank	Capacity Pipe	Price
No 1	2¾	1	1¾	7/32	¾	Bit Brace	⅛ to ½	$1.00
No. 2	3¾	1⅝	2⅛	7/16	1¼	Bit Brace	½ to 1	1.25
No. 3	3¾	1⅝	2⅛	7/16	1¼	½ or 41/64 Rd Shank	½ to 1	1.25
No. 4	4⅝	2	2⅝	1	2 7/16	Bit Brace	1 to 2	3.00
No. 5	3¾	2	1¾	1	2 5/16	T Handle 20 in.	1 to 2	3.50
No. 6	6 7/16	4¼	2 3/16	7/16	2 5/16	T Handle 20 in.	½ to 2	4.00

PLEASE ORDER BY NUMBER.

The above are furnished with either Spiral or Straight Flutes. Unless otherwise ordered Spiral Fluted Reamers will be sent.



Little Giant.

STANDARD TAPER PIN REAMERS.

TAPER ¼ INCH PER FOOT.

No.	Price Each	Diameter Small End	Length of Flutes, Inches	Length Over All, Inch
0	$1.00	.135	1½	2¼
1	1.00	.146	1¾	2½
2	1.25	.162	2	3
3	1.50	.183	2¼	3½
4	1.75	.208	2½	4
5	2.00	.240	3	4½
6	2.25	.279	3⅝	5
7	2.50	.331	4½	6
8	3.00	.398	5¼	6¾
9	3.50	.482	6⅛	8
10	4 00	.581	7	9
11	4.75	.706	8¼	11¼
12	5.50	.842	10	13⅜
13	6.50	1.009	12	16
14	7.75	1.250	14	18¼

Diameter is taken at extreme end.

These Reamers have the same taper and each will overlay in convenient measure the next size smaller.

Special sizes made to order.

Little Giant.

COUNTERSINKS.

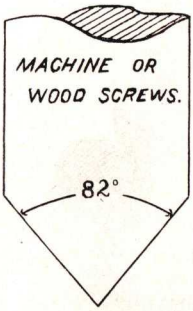
For use in Drilling Machines.

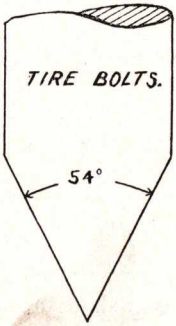
For use in Bit Brace.

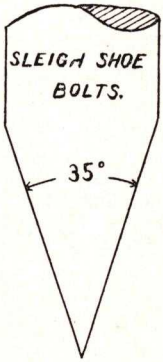
Countersinks are made with three different tapers 82° for machine or wood screws, 54° for Tire Bolts and 35° for Sleigh Shoe Bolts. We give below cut showing these actual Tapers.

We keep in Stock countersinks of the various sizes and Tapers. When ordering state what Taper is wanted.

These countersinks are easily sharpened and very durable, being made from the very best material.







PRICE LIST.

Countersinks	5/8″	diam.,	with	1/2	or	41/64	Shank		$0.50	$5.75
"	3/4″	"	"	"			"		.75	8.50
"	7/8″	"	"	"			"		1.00	11.00
"	1″	"	"	"			"		1.25	14.00
"	5/8″	"	"	Shanks for Bit Brace					.50	5.75
"	3/4″	"	"	"	"	"	"		.75	8.50
"	7/8	"	"	"	"	"	"		1.00	11.00
"	1″	"	"	"	"	"	"		1.25	14.00

When ordering, state carefully just what is wanted.

Unless otherwise ordered countersinks for use in drilling machines will be sent with 1/2″ diameter shank.

Little Giant.

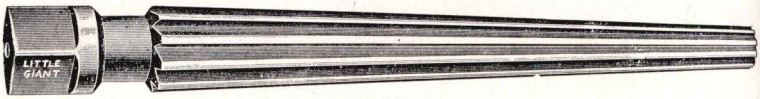
CENTER REAMERS.

A tool highly appreciated by all machinists. Accurately made of best tool steel. Included Angle 60 degrees.

PRICES.

No. of Size	Size Shank	Size Cut.	Each.	Per Dozen.
1	7/16	1/4	$0.22	$2.50
2	1/4	3/8	.25	2.90
3	5/16	1/2	.35	3.75
4	3/8	1/2	.50	5.75
5	1/2	3/4	.60	7.00

When ordering, give either the number of size or size of shank and cut.



LONG TAPER REAMERS

The above illustration shows a long Taper Pipe Reamer. These are made of the same taper as regular pipe reamers, but are long enough in fluted part to ream a great variety of sizes. We make these any size or length up to 3 inch diameter for largest cutting size.

Prices quoted on application.

WHEN ORDERING SPECIAL REAMERS.

GIVE Diameter at small end.
Taper per foot, or else diameter at large end.
Length of flute.
Length over all.
Square or Taper Shank.

SECTION VII.

PAGES 153 TO 174.

GAUGES.

THREAD MICROMETER CALIPER.

LIMIT—FOR SCREW THREADS.

LIMIT—FOR CYLINDRICAL WORK.

STANDARD THREAD.

STANDARD PIPE.

SCREW PITCH.

UNITED STATES STANDARD THREAD.

IN the greater part of our catalog we state that unless otherwise ordered we would furnish "V" form of thread.

This is done because a large number of our tools are still used by parties using the "V" thread.

The Seller's system, recommended by the Franklin Institute of Philadelphia, has been adopted by the United States government, the Master Mechanics and Master Car Builders Associations, Locomotive Works, Machine Bolt Makers and by many manufacturing establishments throughout the country.

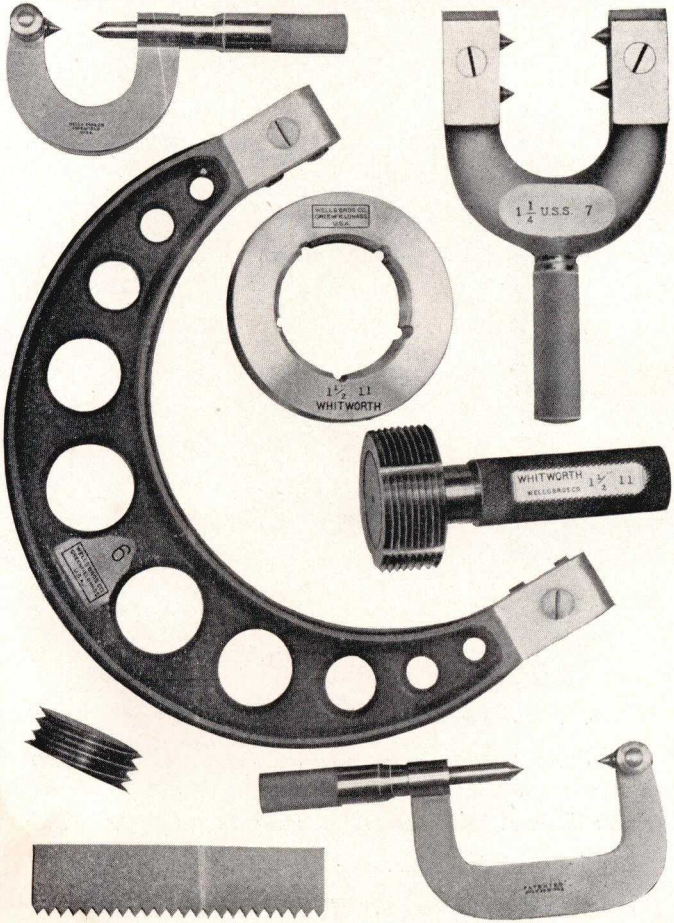
WE RECOMMEND ITS USE WHEREVER POSSIBLE.

The thread has an angle of 60 degrees, with flat top and bottom equal to one-eighth of the pitch. The advantages of this form of thread over the sharp "V" are that in the tap the edges of the thread are less liable to accidental injury and will wear and retain their size and form longer, and, in the bolt, the flat top and bottom give increased strength and an improved appearance, while the greater facility with which practical uniformity and consequent interchangeability are now attained by its use, as compared with the Whitworth form will commend it to the attention of every user of Taps and Dies, wherever its application may be possible.

We list in the pages next following gauges which are interchangeable as to size and correct thread. Unless otherwise ordered we shall send these with the United States Standard form and number of threads, with the exception of the pitch gauges listed on pages 172 and 173.

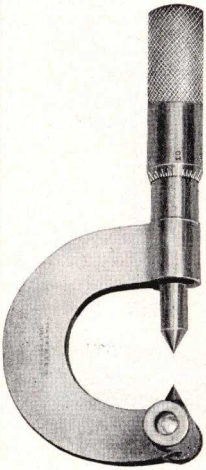
Little Giant.

GAUGES.



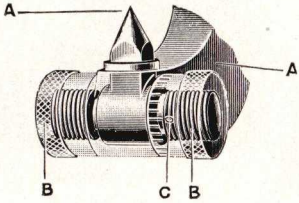
Little Giant.

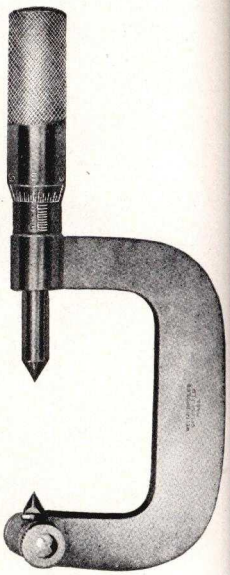
THREAD MICROMETER CALIPER.



No. 1.

Sectional view showing anvil and method of adjustment.





No. 2.

LIST PRICES.

No. 1.	For sizes to one inch inclusive,	**$7.50**
No. 2.	For sizes, one inch to two inches,	**9.00**

These Thread Micrometers take any PITCH of thread within the limits of their size.

For description see pages, 157, 161.

THREAD MICROMETER CALIPER.

THE increased demand for accurate bolts and screws, and the fact that the outside diameter of a screw has very little to do with its fit in the nut or other tapped hole, has led to a demand for an instrument to measure the working size of any bolt or screw.

We have met this demand by offering a caliper so designed as to measure on the ANGLE of any screw THREAD.

This CALIPER is, essentially, a frame carrying TWO STEEL POINTS, arranged to bear diametrically opposite each other on the bolt or screw being measured.

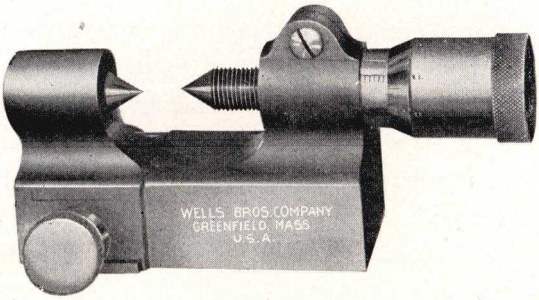
These points are hardened and ground to fit the ANGLE of the THREAD, one point being provided with a side movement to allow its being set over a distance equal to one-half of the pitch of the thread, so that the points will enter at right angles to the axis of the screw.

The other point is the end of a screw arranged to travel in a direction parallel to its axis, and carries a sleeve so graduated as to read in thousandths of an inch the same as an ordinary micrometer caliper.

Little Giant.

THREAD MICROMETER CALIPER.

FOR SHOP USE.



No. 3.

For description see page 159

No 3. For sizes from ¼ to one inch inclusive.

PRICE, **$25.00.**

THREAD MICROMETER CALIPER.

CONTINUED FROM PAGE 157.

THIS caliper bears only on the angle, as the points are flattened enough to clear the bottom of even a U. S. S. form of thread, and measures the size of what would be the core if the thread were theoretically sharp at bottom.

These micrometers are furnished in several styles and sizes, the most popular style being that shown on page 156.

This style, called the hand thread micrometer, is made in two sizes as shown, the smaller one having a capacity of any size up to and including 1″, while the capacity of the larger one is 1″ to 2″ inclusive.

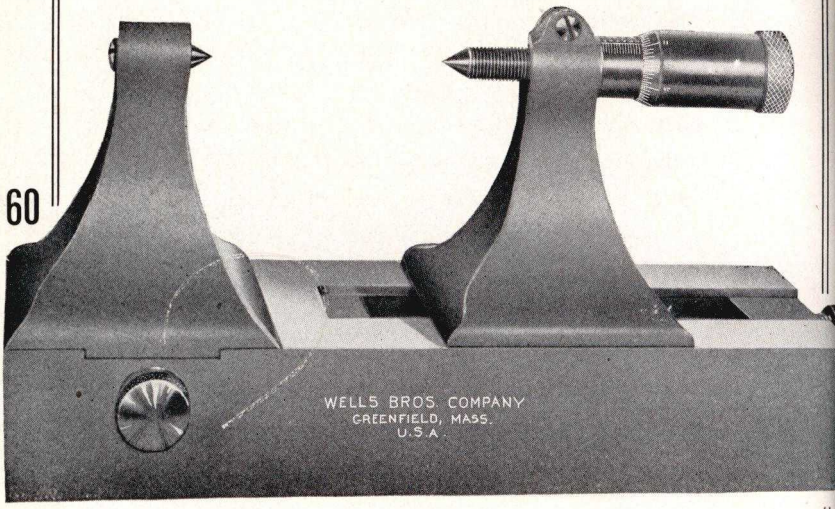
The micrometer shown on page 158 and known as the shop micrometer, is made somewhat heavier than the other, having a base of its own, and is considered to be in some ways preferable, for the use of manufacturers, to the one just mentioned.

This is made in two sizes, having respectively a capacity of ¼″ to 1″, and ¾″ to 1½″.

Little Giant.

THREAD MICROMETER.

FOR FACTORY USE.



No. 4.

No. 4. For sizes 1½ inches to 6 inches.

PRICE, **$80.00.**

THREAD MICROMETER CALIPER.

(Continued From Page 159.)

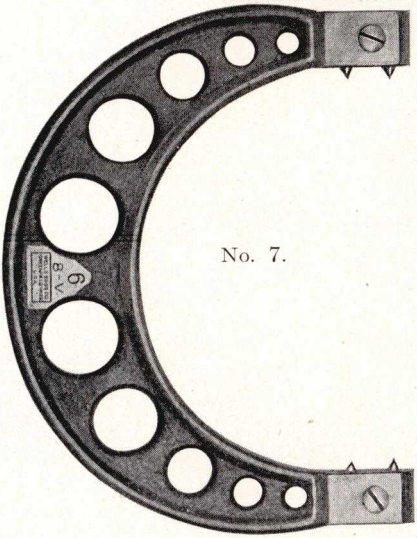
OUR large thread micrometer, shown on page 160 is made to cover a large range of sizes, the block carrying the micrometer screw being arranged to clamp down at 1″ intervals, being set to position by means of standard end gauges placed between the hardened steel plugs, one of which is shown beneath the screw point.

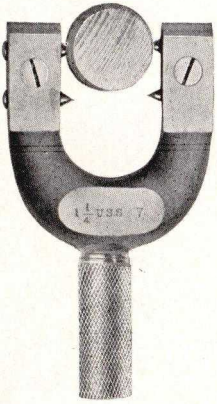
We make this style having the lower size limit 1½″ and the upper limit any size desired, and shall be pleased to quote prices on application for the same.

Parties ordering any of our micrometers should state what style of thread it is to be used for, whether U. S. S., "V" or Whitworth.

For all except fine pitches the same micrometer may be used on U. S. S. and "V" threads.

LIMIT GAUGES—FOR SCREW THREADS.





STYLES Nos. 6 and 8

Range	Price	Range	Price
No. 1. ¼ to $\frac{7}{16}$ inclusive	$2.25	No. 5. 1¼ to $1\frac{7}{16}$ inclusive	$2.50
No. 2. ½ to $\frac{11}{16}$ "	2.25	No. 6. 1½ to $1\frac{11}{16}$ "	2.50
No. 3. ¾ to $\frac{15}{16}$ "	2.25	No. 7. 1¾ to $1\frac{15}{16}$ "	3.00
No. 4. 1 to $1\frac{7}{16}$ "	2.25	No. 8. 2 to $2\frac{7}{16}$ "	3.00

STYLES Nos. 7 and 9.

Range	Price	Range	Price
No. 9. 2¼ to $2\frac{11}{16}$	$3.50	No. 17 6¼ to $6\frac{11}{16}$	5.50
No. 10. 2¾ to $3\frac{3}{16}$	3.50	No. 18. 6¾ to $7\frac{3}{16}$	7.00
No. 11. 3¼ to $3\frac{11}{16}$	3.50	No. 19. 7¼ to $7\frac{11}{16}$	7.00
No. 12. 3¾ to $4\frac{3}{16}$	3.50	No. 20. 7¾ to $8\frac{3}{16}$	7.75
No. 13. 4¼ to $4\frac{11}{16}$	4.50	No. 21. 8¼ to $8\frac{11}{16}$	7.75
No. 14. 4¾ to $5\frac{3}{16}$	4.50	No. 22. 8¾ to $9\frac{3}{16}$	8.50
No. 15. 5¼ to $5\frac{11}{16}$	4.50	No. 23. 9¼ to $9\frac{11}{16}$	9.50
No. 16. 5¾ to $6\frac{3}{16}$	5.50	No. 24. 9¾ to $10\frac{3}{16}$	12.00

We furnish Plugs to set LIMIT GAUGES for screw threads at following prices, which are to be added to above list prices.

Plugs for Nos. 1-2-3-4,	.50 each	Plugs for Nos. 15-16,	$1.00
Plugs for Nos. 5–6,	.60 "	Plugs for Nos. 17–18,	1.15
Plugs for Nos. 7–8,	.75 "	Plugs for Nos. 19–20,	1.25
Plugs for Nos. 9–10–11,	.80 "	Plugs for Nos. 21–22,	1.40
Plugs for Nos. 12–13–14,	.85 "	Plugs for Nos. 23–24,	1.50

LIMIT GAUGES FOR SCREW THREADS.

THESE gauges are the outcome of a necessity in our own factory for a simple ever ready gauge for testing threaded work in large quantities, and our experience has proved them to be well adapted to this purpose.

The construction is shown by the halftone, the points being offset one half of the pitch of the thread to allow them to enter the thread square to the axis of the bolt or screw being measured.

We furnish with each gauge at a small cost two threaded discs to be used for setting the two pairs of working points, thus determining the variation allowed in the inspection of the work, and also providing the means of testing the gauges at any time.

The working points of these gauges may be removed at any time and reground if worn, then adjusted to size, thus giving the gauge an almost indefinite life of usefulness.

We can furnish these gauges for any size, and any pitch of thread desired in either U. S. S., or "V" or Whitworth form.

Customers, when ordering, should specify the sizes of discs wanted, otherwise we shall send them with one disc of the size stamped on the gauge and one .005″ smaller, this being according to our practice in testing bolts and screws for commercial use.

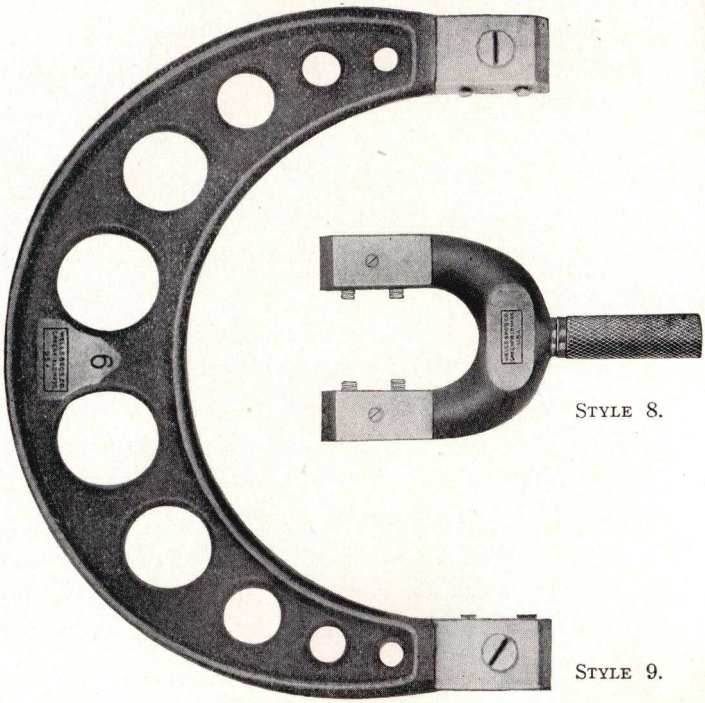
For sizes of 2½″ and smaller these gauges are made of the style No. 6, and for larger sizes of style No. 7.

Hardened steel plugs are used to set gauges.

Prices quoted on application.

LIMIT GAUGES.

FOR CYLINDRICAL WORK.



STYLE 8.

STYLE 9.

For Prices of LIMIT GAUGES, see list on page 162.

LIMIT GAUGES FOR CYLINDRICAL WORK.

THESE gauges furnish a simple, accurate method of testing any cylindrical work, and bringing its size within whatever limits may be desired.

The common method of "must go through" and "must not go through" is employed here as will be seen by the illustrations.

The gauges are of a form that is at once both light and rigid.

The contact points have a bearing of about ¼″ and are set by means of standard discs or end gauges to give whatever allowance is desired, either under or over the standard size.

When customers do not specify we shall send the gauge. set .001″ over, and .001″ under the size stamped on the gauges.

The sizes up to and including 2½″ are made of the style No. 8, larger sizes of the style No. 9.

We can furnish these gauges in any size desired.

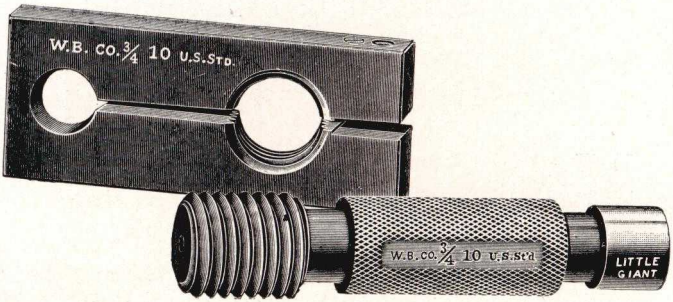
The prices quoted do not include the standards for setting the gauges, but these can be furnished if desired.

Prices quoted on application.

Little Giant.

STANDARD THREAD GAUGES.

EXTERNAL AND INTERNAL.



We include these in our list as being desirable where a set of reference gauges is required having the highest degree of accuracy that modern mechanical skill and equipment can produce.

These gauges are furnished with the U. S. S., "V" or Whitworth form of thread, either right of left hand as desired.

The plug gauge is made accurate to size, and is the standard to which the internal gauge is adjusted, the method of adjustment being shown by the cut.

One end of the plug gives the diameter at bottom of thread, and is useful in determining the drill size.

U. S. S. Threads are flat at top one-eighth the pitch, the bottom being sharp to give the clearance necessary.

LIST OF SIZES AND PRICES.
HARDENED BUT NOT GROUND IN ANGLE OF THREAD

	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16
Price	$7.50	7.50	8.00	8.00	8.50	8.50	9.50	9.50	10.00	10.00
Size	7/8	15/16	1	1 1/8	1 1/4	1 3/8	1 1/2	1 5/8	1 3/4	1 7/8
Pr.	$11.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00
Size	2	2 1/8	2 1/4	2 3/8	2 1/2	2 5/8	2 3/4	2 7/8	3	
Pr.	$20.00	22.00	25.00	27.00	29.00	31.00	33.50	36.00	38.50	

Plugs ordered separately 60 per cent. of above list Templets ordered separately, 40 per cent. of above list. Sizes above 3 inches and special thread gauges made to order, at prices which will be quoted on application.

Left Hand Threads furnished at same list prices.

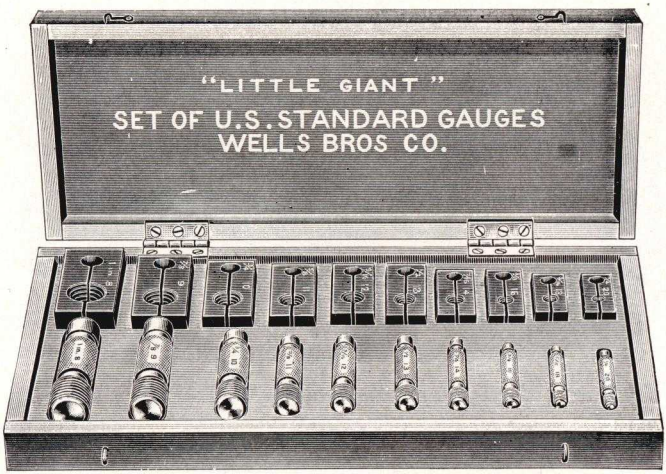
United States Standard Threads sent unless otherwise ordered.

"V" or Whitworth forms at same prices.

Little Giant.

STANDARD THREAD GAUGES.

EXTERNAL AND INTERNAL.



These sets of gauges (external and internal) if so desired, are put up in in elegant hardwood cases, as shown above, making a convenient and compact way for keeping these tools. At prices given below.

LIST PRICES OF SETS OF GAUGES IN CASE.

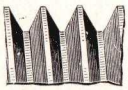
Assortment No. A. External and Internal.
$\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{9}{16}$, $\frac{5}{8}$, $\frac{11}{16}$, $\frac{3}{4}$ inch **$80.00**

Assortment No. B. External and Internal.
$\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{9}{16}$, $\frac{5}{8}$, $\frac{11}{16}$, $\frac{3}{4}$, $\frac{13}{16}$, $\frac{7}{8}$, $\frac{15}{16}$, 1 inch **115.00**

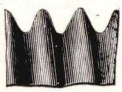
Assortment No. C. External and Internal.
$1\frac{1}{8}$, $1\frac{1}{4}$, $1\frac{3}{8}$, $1\frac{1}{2}$, $1\frac{5}{8}$, $1\frac{3}{4}$, $1\frac{7}{8}$, 2 inch **135.00**

Assortment No. D. External and Internal.
$2\frac{1}{8}$ $2\frac{1}{4}$, $2\frac{3}{8}$, $2\frac{1}{2}$, $2\frac{5}{8}$, $2\frac{3}{4}$, $2\frac{7}{8}$, 3 inch **250.00**

"V" Thread."



U. S. Standard Thread.

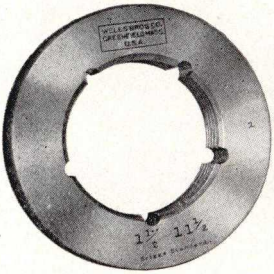


Whitworth Thread.

Little Giant.

STANDARD PIPE PLUGS AND GAUGES.

BRIGGS STANDARD.



WHITWORTH OR BRITISH STANDARD.

These gauges are sold either singly or in sets. HARDENED or UNHARDENED.

RIGHT or LEFT HAND.

With HARDENED PLUG. UNHARDENED RING.

To suit the requirements of purchasers.

STANDARD PIPE PLUGS AND GAUGES.

BRIGGS STANDARD.

THE fact that wrought iron pipe is made by different manufacturers than those who make the fittings to be used with the pipe, leads to the necessity of having sets of gauges for each manufacturer to work to and which are known to be accurate.

The BRIGGS STANDARD of size and pitch of thread having been adopted by the manufacturers of wrought iron pipe and boiler tubes in the United States, we make a combination reference and working set of gauges which are accurate to size and pitch according to this standard, and may be briefly described as follows:

These gauges have a uniform taper of ¾″ to the foot or an inclination to the axis of 1 in 32.

Little Giant.

PRICE LIST
STANDARD PIPE THREAD GAUGES.

BRIGGS AND WHITWORTH.

SIZES AND PITCH.

EXTERNAL AND INTERNAL. RIGHT HAND.

Size Inches.	Soft Plug	Hardened Plug	Soft Ring	Hardened Ring	Soft Plug and Ring.	Hardened Plug and Ring
1/8	$2.75	$3.00	$2.75	$3.00	$5.50	$6.00
1/4	3.40	3.75	3.40	3.75	6.80	7.50
3/8	4.15	4.55	4.15	4.55	8.30	9.10
1/2	4.75	5.25	4.75	5.25	9.50	10.50
3/4	5.25	5.80	5.25	5.80	10.50	11.60
1	6.25	6.85	6.25	6.85	12.50	13.70
1 1/4	7.00	7.75	7.00	7.75	14.00	15.50
1 1/2	7.75	8.55	7.75	8.55	15.50	17.10
2	8.25	9.15	8.25	9.15	16.50	18.30
2 1/2	9.00	10.00	9.00	10.00	18.00	20.00
3	10.00	11.00	10.00	11.00	20.00	22.00
3 1/2	11.25	12.35	11.25	12.35	22.50	24.70
4	12.25	13.50	12.25	13.50	24.50	27.00
4 1/2	13.50	14.85	13.50	14.85	27.00	29.70
5	16.25	17.85	16.25	17.85	32.50	35.70
6	17.50	19.25	17.50	19.25	35.00	38.50
7	19.25	21.15	19.25	21.15	38.50	42.30
8	21.50	22.65	21.50	22.65	43.00	45.30
9	23.25	25.60	23.25	25.60	46.50	51.20
10	25.00	27.50	25.00	27.50	50.00	55.00
11	27.50	29.25	27.50	29.25	55.00	58.50
12	30.00	33.00	30.00	33.00	60.00	66.00

Unless otherwise instructed unhardened Plugs and Rings will be sent on all orders.

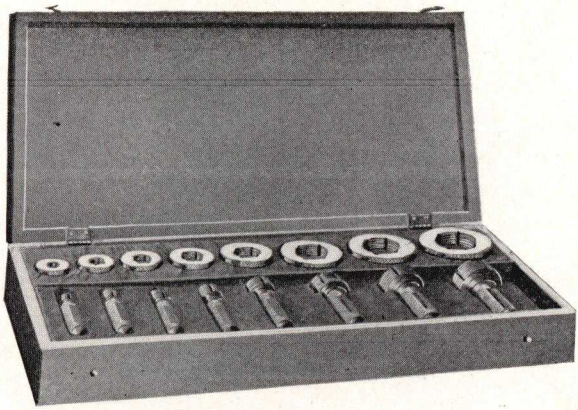
Left Hand Plugs and Rings advance the list price 20 per cent.

These Gauges taper 3/4 inch to the foot.

Little Giant.

STANDARD PIPE PLUGS AND GAUGES.

BRIGGS OR WHITWORTH STANDARDS.



LIST PRICES WHEN SOLD IN SETS.

External and Internal, UNHARDENED.

Assortment No. 1.	Sizes 1/8 to 2 inches inclusive, without case, With case, $103.00.	$100.00
Assortment No. 2.	Sizes 1/8 to 3 inches inclusive, without case, With case, $140.00.	$135.00
Assortment No. 3.	Sizes 1/8 to 6 inch inclusive, without case, With cases, $285.00.	$270.00
Assortment No. 4.	Sizes 1/8 to 8 inch inclusive, without case, With cases, $360.00.	$340.00
Assortment No. 5.	Sizes 1/8 to 12 inch inclusive, without case, With cases, $555.00.	$525.00

LIST PRICES WHEN SOLD IN SETS.

External and Internal, HARDENED.

Advance above List Prices (10) ten per cent.

If Plugs are wanted hardened and rings unhardened take list prices on opposite page.

Left Hand Gauges are sold at (20) twenty per cent. advance over prices on opposite page.

Prices quoted on application for sizes larger than 12 inches.

Little Giant.

SCREW PITCH GAUGES.

FIG. 1.—Showing Set of Eight Screw Pitch Gauges in Case.

FIG. 2—Showing Screw Pitch Gauges.

Showing Screw Pitch Gauge as applied to Screw.

SCREW PITCH GAUGES.

THESE gauges are very useful in furnishing a quick way to tell the pitch of a screw and accuracy of the thread. Being about 4″ long and accurately made, they will very readily show any slight variation from the true pitch, thus making them desirable for the use of those who wish to determine the change of pitch resulting from the hardening of taps, screws, etc.

These are furnished with the U. S. Standard, sharp "V" or Whitworth forms of thread, but will be sent with the "V" form unless otherwise specified.

We furnish these GAUGES in sets of TWELVE, put up in neat wood case, or single as desired.

LIST PRICES.

Size Gauge (any pitch) as shown in Figure 2 ..... **$0.30**

One Set of Twelve Gauges (any pitches) in case **3.75**

If larger number are wanted put up in case, price of case quoted on application.

GAUGES.

We have described and listed in this catalog our line of Gauges.

The description given is limited. In fact practically the only information given is the list prices and what description is necessary.

If more detailed information is needed advise us or send for our

GAUGE CATALOG.

Our Gauge Catalog describes in detail our entire line of

THREAD MICROMETER CALIPERS.

LIMIT GAUGES.

STANDARD THREAD GAUGES.

SCREW PITCH GAUGES AND

STANDARD PIPE THREAD GAUGES.

Minute description with formulas, tables, sketches, instructions, etc., are given.

We have not found it necessary to give all the above in this catalog, but we shall be pleased to forward our Gauge Catalog on request.

SECTION VIII.

PAGES 175 TO 208.

BOLT CUTTERS AND NUT TAPPERS.

HAND.

BENCH.

POWER.

OPEN DIE.

COUNTERSHAFTS.

ADJUSTABLE PIPE DIES.

TAP CHUCKS.

BOLT CUTTERS AND NUT TAPPERS.

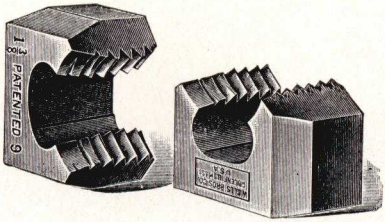
WE give on the following pages illustrations of our complete line of Bolt Cutters and Nut Tappers, besides such description as seems to us necessary.

If the information given does not in any case seem sufficient write us and we will either answer your inquiry in detail or send you copy of our Bolt Cutter and Nut Tapper Catalog which gives detailed information in regard to each machine.

Of the Bolt Cutters themselves we cannot speak too highly. They have all the benefits of our years of experience and from the satisfaction which our machines have always given we are sure that they will continue satisfactory.

We have added a complete line of Opening Die Bolt Cutters and Nut Tappers which we also illustrate. These are machines which we have been working on for some time and we think they are as near perfect as any made.

Little Giant.



BOLT CUTTERS AND NUT TAPPERS

FURNISHED WITH THE

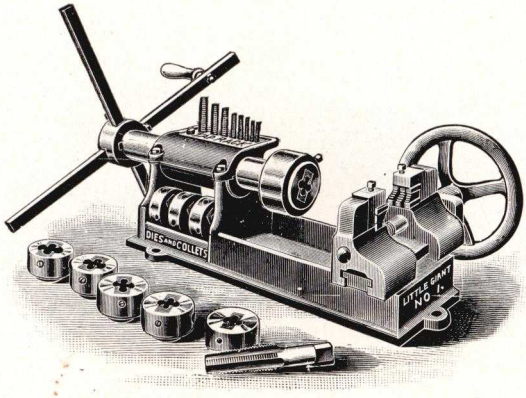
"LITTLE GIANT"

ADJUSTABLE DIE

Little Giant.

HAND BOLT CUTTERS AND NUT TAPPERS.

FOR BENCH USE.



The Collets and Taps are the same as those used in screw plates.

No. 1 Assortment No. A.

	Price.
Cuts $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$	**$30.00**

No. 1 Assortment No. B.

Cuts $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, and 1^{8} inch	**40.00**

Each assortment contains TAPS, DIES, COLLETS, TAP CHUCK, WRENCHES and HANDLES.

When ordering, give number of Bolt Cutter and state assortment wanted.

APPROXIMATE WEIGHTS AND MEASUREMENTS.

Net weight 126 lbs. Weight boxed, 165 lbs. Dimensions boxed 31 by 16 by 11 inches.

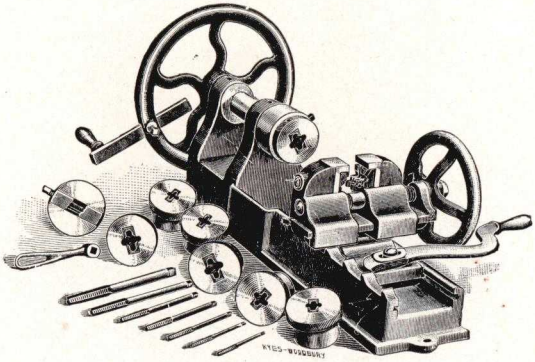
"V" threads oversize furnished unless otherwise ordered.

U. S. S. and Whitworth threads furnished at same list prices.

Little Giant.

HAND BOLT CUTTERS AND NUT TAPPERS.

FOR BENCH USE.



Assortment No. 6.

Above machine complete for Bench, with Tap Chuck, Taps, Dies, and Collets.

Price.

Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$ **$50.00**

For price list of parts see page 188.

For list of threads and prices on Taps, see page 20.

APPROXIMATE WEIGHTS AND MEASUREMENTS.

BENCH MACHINE—Net 200 lbs. Boxed, 255 lbs. Dimensions boxed 37 by 20 by 17 inches.

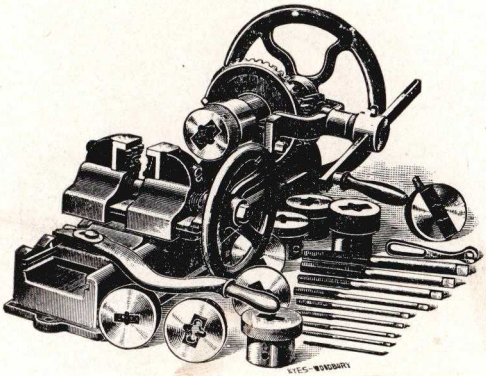
"V" threads oversize furnished unless otherwise ordered.

U. S. S. and Whitworth threads furnished at same list prices.

Little Giant.

HAND BOLT CUTTERS AND NUT TAPPERS.

FOR BENCH USE.



Assortment No. 7.

Above machine complete, for Bench, with Tap Chuck, Taps, Dies and Collets.

Price.

Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8} **$70.00**

For list of threads and prices on Taps see page 208.

For price list of other parts see page 188.

APPROXIMATE WEIGHTS AND MEASUREMENTS.

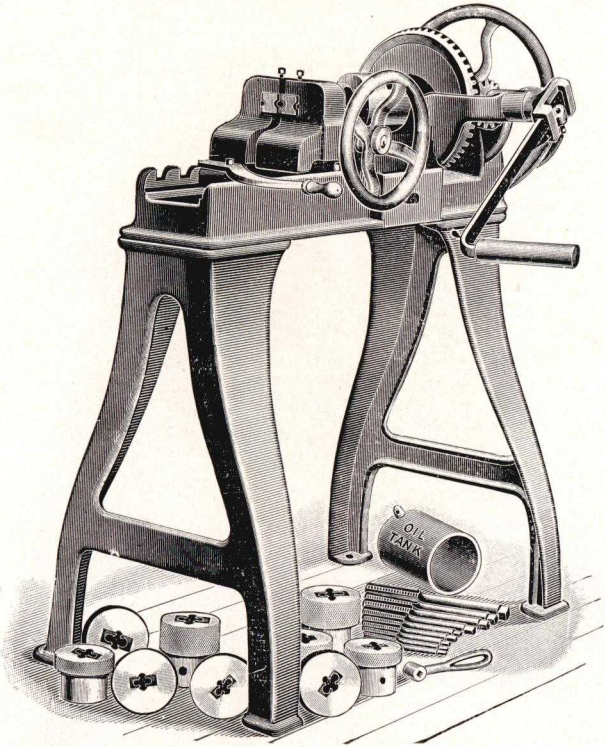
Net weight 265 lbs. Weight boxed, 320 lbs. Dimensions boxed, 37 by 20 by 17 inches.

"V" threads oversize furnished unless otherwise ordered.

U. S. S. and Whitworth threads furnished at same list prices.

Little Giant.

HAND BOLT CUTTERS AND NUT TAPPERS.



Assortment No. 6. Mounted on Legs.

With Tap Chuck, Taps, Dies, and Collets. Price.

Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$ **$57.00**

Assortment No. 7. Mounted on Legs.

With Tap Chuck, Taps, Dies, and Collets. Price.

Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8}..... **$77.00**

When ordering, be sure to state MOUNTED ON LEGS.

For list of sizes and threads on Taps see page 208.

For price list of other parts see page 188.

"V" threads oversize furnished unless otherwise ordered.

U. S. S. and Whitworth threads furnished at same list prices.

APPROXIMATE WEIGHTS AND MEASUREMENTS.

No. 6. ON LEGS.—Net 250 lbs., crated for domestic shipment, 300 lbs., boxed for export 355 lbs. Dimensions, 38 by 26 by 21 inches.

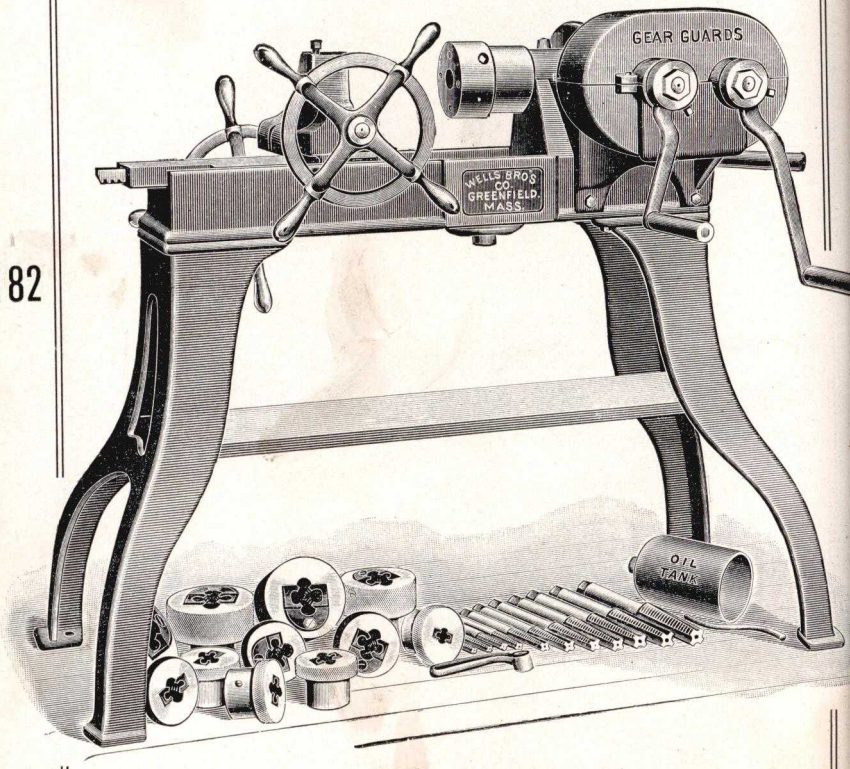
Floor space, 38 by 21 inches.

No. 7, ON LEGS—Net weight 335 lbs. Weight crated 385 lbs. Weight boxed, 425 lbs. Dimensions boxed, 38 by 26 by 24 inches.

Floor space, 38 by 24 inches.

Little Giant.

HAND BOLT CUTTERS AND NUT TAPPERS.



MACHINE SUPPLIED WITH ASSORTMENTS
NOS. 8-8½-9.

Little Giant.

HAND BOLT CUTTERS AND NUT TAPPERS.

Assortment No. 8.

Machine complete with Tap Chuck, Taps, Dies and Collets, cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8} **$100.00**

Assortment No. 8½.

Machine complete with Tap Chuck, Taps, Dies and Collets, cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$ $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8}, $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$.. **$118.00**

183

Assortment No. 9.

Machine complete with Tap Chuck, Taps, Dies and Collets, cutting $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8}, $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$, $1\frac{3}{8}^{6}$, $1\frac{1}{2}^{6}$ **$140.00**

Right Hand Adjustable Pipe Dies and Collets as listed on page 190, cutting ¼, ⅜, ½, ¾, 1¼, 1, 1½, 2, furnished with above machine at extra..... **$25.00**

Balance wheel furnished on end of spindle for extra **5.00**

These machines have four changes of speed multiplying the power eleven, five and two times and equalizing it once.

Approximate Weights and Dimensions.

Weights—Net, 465 lbs. Crated for domestic shipment, 625 lbs. Boxed for export, 725 lbs.

Dimensions boxed, 50 by 47 by 27 inches.

Floor space, 50 by 27 inches.

For Price List of parts see page 188.

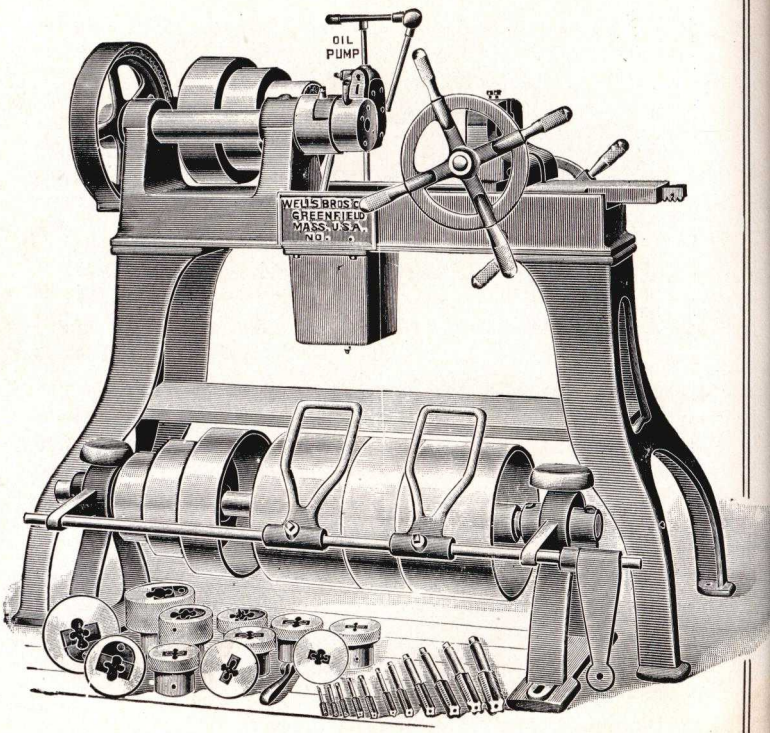
"V" threads oversize furnished unless otherwise ordered.

U. S. S. and Whitworth threads furnished at same list prices.

Little Giant.

BOLT CUTTERS AND NUT TAPPERS.

FOR POWER.



MACHINE SUPPLIED WITH ASSORTMENTS

Nos. 10 and 10½.

Little Giant.

BOLT CUTTERS AND NUT TAPPERS.

FOR POWER.

Assortment No. 10.

Machine complete with Oil Pump, Gear Guards, Plain Countershaft, Tap Chuck, Taps, Dies and Collets, cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$. $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8} **$115.00**

If with Friction Countershaft, **$10.00** list extra.

Assortment No. 10½.

Machine complete with Oil Pump, Gear Guards, Plain Countershaft, Tap Chuck, Taps, Dies and Collets, cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8}, $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$, ... **$133.90**

If with Friction Countershaft **$10.00** list extra.

Right hand Adjustable Pipe Dies and Collets illustrated on page 190, cutting ¼, ⅜, ½, ¾, 1, 1¼, 1½, 2 furnished with above machine at extra **$25.00**

Geared 5 to 1.

Capacity 1¼ inch bolts, 2 inch pipe.

Machine has three step cone pulley 6, 8 and 10 inch diameter by 3 inch face, giving three changes of speed. Driving pulleys on countershaft measure 3½ by 10 inches.

A crank is supplied so that machine can be worked by hand if desired.

Speed of countershaft 250 revolutions per minute.

"V" oversize threads are sent unless otherwise ordered.

U. S. S. and Whitworth threads furnished at same list price.

For price list of parts seee page 188.

APPROXIMATE WEIGHTS AND MEASUREMENTS.

Weights—Net, 650 lbs. Crated for domestic shipment 850 lbs. Boxed for export, 925 lbs.

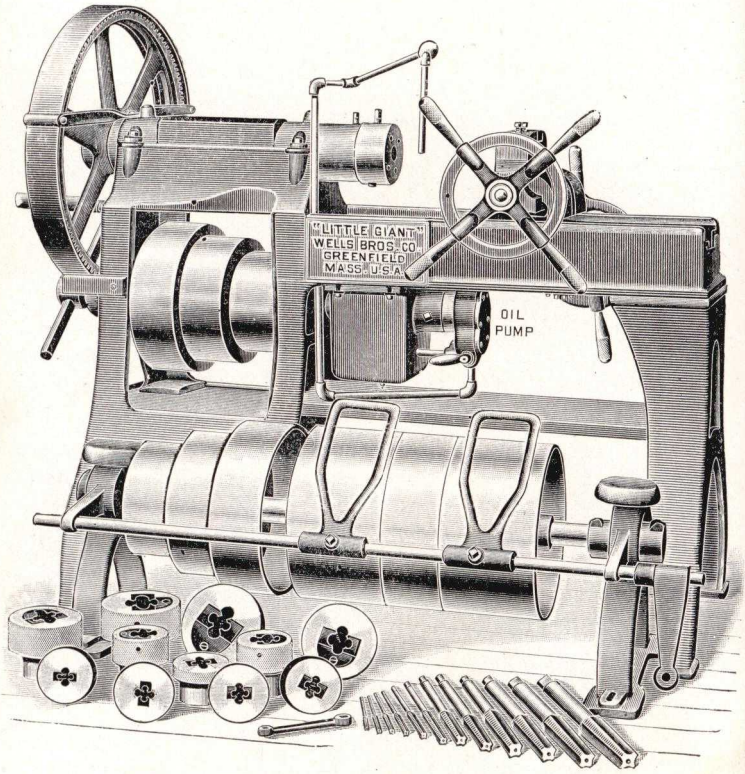
Dimensions boxed 53 by 48 by 27 inches.

Floor space 53 by 27 inches.

Little Giant.

BOLT CUTTERS AND NUT TAPPERS.

FOR POWER.



MACHINE SUPPLIED WITH ASSORTMENT
No. 12.

BOLT CUTTERS AND NUT TAPPERS.

FOR POWER.

Assortment No. 12.

Machine complete with Oil Pump, Gear Guards, Plain Countershaft, Tap Chucks, Taps, Dies and Collets, cutting $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$, $1\frac{3}{8}^{6}$, $1\frac{1}{2}^{6}$ **$165.00**

If with Friction Countershaft **$10.00** list extra.

Right hand Adjustable Pipe Dies and Collets as illustrated on page 190, cutting $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, $1\frac{1}{4}$, $1\frac{1}{2}$, 2, $2\frac{1}{2}$ furnished with above machine at extra **$30.00**

Geared 8 to 1.

Has Oil Pump and Tank.

Three step cone pulley 8, 10 and 12 inch diameter by $3\frac{1}{2}$ inch face, gives three changes of speed.

Driving pulleys on countershaft measures $3\frac{1}{2}$ by 12 inches. A crank is furnished so as to work Machine by hand when desired.

Speed of countershaft 200 revolutions per minute.

"V" oversize threads are sent unless otherwise ordered.

U. S. S. and Whitworth threads furnished at same prices.

For price list of Taps with threads and sizes, see page 208.

For price list of other parts see page 188.

APPROXIMATE WEIGHTS AND MEASUREMENTS.

Weights—Net, 915 lbs. Crated for domestic shipment, 1025 lbs. Boxed for export, 1240 lbs.

Dimensions boxed 55 by 52 by 29 inches.

Floor space 55 by 29 inches.

BOLT CUTTERS AND NUT TAPPERS.

PRICES OF "LITTLE GIANT" ADJUSTABLE BOLT DIES, COLLETS AND MACHINE NUT TAPS FOR BOLT CUTTERS AND NUT TAPPERS.

Sizes	U.S. Standard Threads	"V" Form Threads	Whitworth Standard Threads	Machine Nut Taps	Adj. Dies without Collets	Collets
1/4	20	20	20	$0.60	$1.00	$1.00
5/16	18	18	18	.70	1.00	1.00
3/8	16	16	16	.80	1.25	1.00
7/16	14	14	14	.90	1.25	1.00
1/2	13	12	12	1.00	1.50	1.00
9/16	12	12	12	1.15	1.50	1.00
5/8	11	11	11	1.30	1.75	1.00
11/16	11	11	11	1.45	1.75	1.00
3/4	10	10	10	1.60	2.00	1.00
13/16	10	10	10	1.80	2.00	1.50
7/8	9	9	9	2.10	2.75	1.50
15/16	9	9	9	2.40	2.75	1.50
1	8	8	8	2.80	2.75	1.50
1 1/16	8	8		3.00	4.00	1.50
1 1/8	7	7	7	3.20	4.00	1.50
1 3/16	7	7		3.45	4.00	1.50
1 1/4	7	7	7	3.70	4.00	1.50
1 5/16	7	7		3.95	5.00	1.50
1 3/8	6	6	6	4.20	5.00	1.50
1 7/16	6	6		4.45	5.00	1.50
1 1/2	6	6	6	4.70	5.00	1.50

For other threads and sizes which we furnish as regular, see list of Tap page 208.

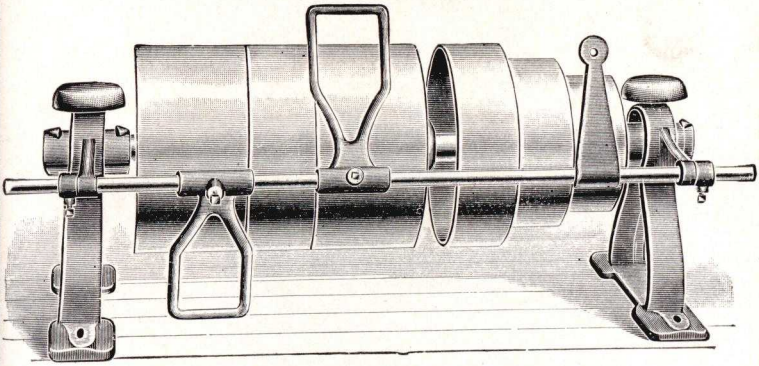
Collet Caps 1/4 to 3/4 ..... **$0.80**
" " 13/16 to 1 1/2 ..... **1.00**
" Nuts 1/4 to 3/4 ..... **.20**
" Gibs 13/16 to 1 1/2 ..... **.50**

Notice that the prices just given are not prices on complete Collets. Collets list at $1.00 and $1.50. Above prices are prices on parts.

Steel jaws for Bolt Cutter $2.00.

Little Giant.

BOLT CUTTERS AND NUT TAPPERS.

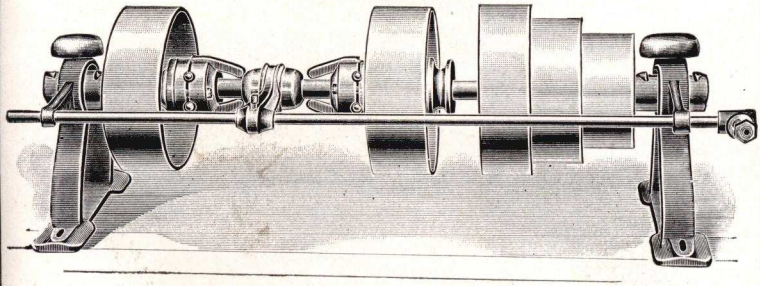


PLAIN COUNTERSHAFT.

These countershafts are made from our latest patterns. Have self-oiling boxes. When ordering state diameter and face.

PRICES OF PLAIN COUNTERSHAFTS.

Diameter of Pulleys	Width of Face	Price
10 Inches	3½ Inches	$15.00
12 "	3½ "	15.00



FRICTION COUNTERSHAFT.

These pulleys are of ample power, easily adjusted and will not slip nor stick.

PRICES OF FRICTION COUNTERSHAFT.

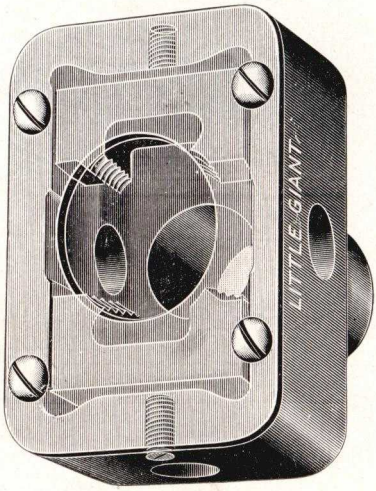
Diameter of Pulleys	Width of Face	Price
12 Inches	3 Inches	$25.00
12 "	4 "	25.00

These countershafts are furnished complete with cone pulley.

Little Giant.

MACHINE COLLETS WITH ADJUSTABLE DIES.

FOR PIPE.



We are prepared to furnish our Patent ADJUSTABLE DIE, "LITTLE GIANT," for Threading PIPE in the style of collet illustrated above. These Collets have Shanks 2¾ inch diameter. With these dies, variations of pipe can be overcome. Can be resharpened. They are intended for use in our BOLT CUTTERS and NUT TAPPERS.

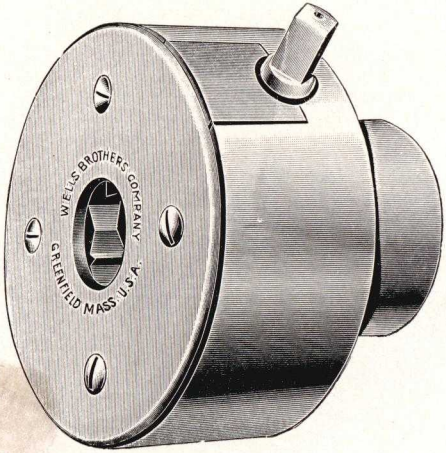
LIST OF SIZES AND PRICES.

Sizes	⅛	¼	⅜	½	¾	1	1¼	1½	2	2½
Price of Die	$1.25	$1.25	$1.25	$1.25	$1.25	$1.25	$3.00	$3.00	$3.00	$3.00
Price of Collet	$1.50	$1.50	$1.50	$1'50	$1.50	$1.50	$2.00	$2.00	$2.00	$2.50

These are regularly furnished with the BRIGGS STANDARD Threads. WHITWORTH form furnished if desired, at same list prices.

BOLT CUTTERS AND NUT TAPPERS.

TAP CHUCKS.



The above shows Tap Chucks as regularly furnished with the Bolt Cutters listed on pages 178 to 186.

When ordering these chucks either give size or number of machine on which they are to be used.

Nos. 1, 6, 7, 8 and **10** holds Taps 1/4 to 1 inch **$8.00**

Nos. 8 1/2, 9, 10 1/2 and **12** holds Taps 3/8 to 1 1/2 inches .. **10.00**

These numbers correspond to the number of Bolt Cutter on which they are used.

BOLT CUTTERS AND NUT TAPPERS.

BOLT CUTTERS.

We give below price list of our full line of Bolt Cutters and Nut Tappers, without Taps, Dies, Collets, Tap Chuck, and Countershaft—**just the plain machine.**

If other parts are wanted, prices will be found in the several list prices in catalogue.

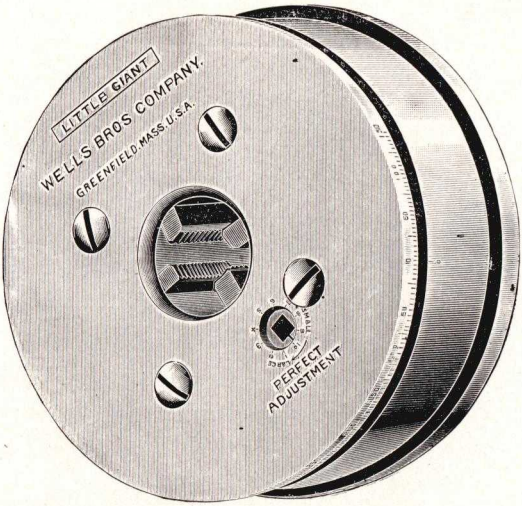
No. 6.	Machine as stated above	**$25.00**
No. 7.	Machine as stated above	**30.00**
No. 8, 8½, 9.	Machine as stated above	**65.00**
No. 10.	Machine as stated above	**65.00**
No. 12.	Machine as stated above	**80.00**
No. 1. inch	Open Die Machine as above	**80.00**
No. 1½ inch	Open Die Machine as above	**100.00**
No. 2. inch	Open Die Machine as above	**125.00**

Where parties do not care for machine with full assortment of Taps, Dies, and Collets, as listed, they will take the above list prices and add to them list price of the parts wanted according to the different lists.

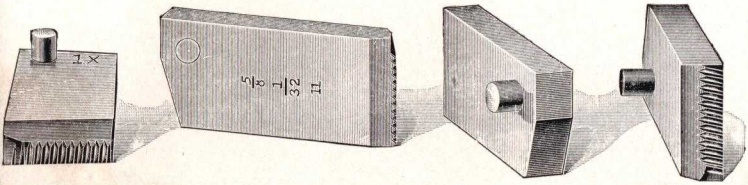
Little Giant.

OPENING DIE

BOLT CUTTERS AND NUT TAPPERS.



OPEN DIE HEAD USED ON BOLT CUTTERS SHOWN ON FOLLOWING PAGES.



DIE LANDS AS USED IN ABOVE DIE HEAD.

OPENING DIE BOLT CUTTERS AND NUT TAPPERS.

GENERAL DESCRIPTION

OF THE "LITTLE GIANT" OPENING DIE BOLT CUTTING, NUT TAPPING AND PIPE THREADING MACHINES.

CUT gears are used throughout and the machines are geared to five more than the usual power of bolt cutting machines.

The claim for them, in addition to their proper design and proportions, is unusual simplicity in both construction and operation, also great efficiency, durability, precision and accuracy.

The adjustment of the dies is graduated to .001 inch.

(See cut and description of Die Head pages 196 and 199.

Each machine is supplied with an exceptionally large and powerful oil pump and a good-sized and convenient oil tank with strainer.

The vises on these machines are strong and hold the work central and tight. Two or more sets of steel jaws for holding bolt, pipe and nuts are furnished. These are interchangeable as well as replaceable.

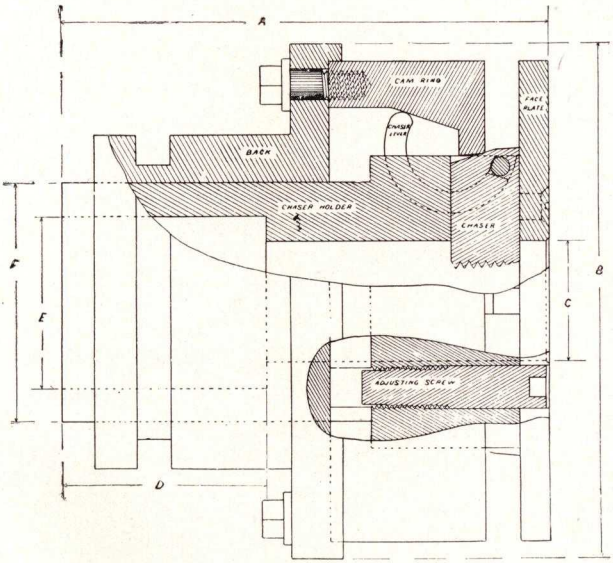
The taps are held in the Die Head by steel jaws, with Vs, occupying the places of the chasers. The large taps are held by four jaws the small taps by two. These jaws grip the taps firmly without marring or twisting them. The taps can be removed for unloading the threaded nuts and again replaced in the Die Head without stopping machine.

An iron rack is fastened to every machine for holding the dies, taps, tap-jaws and wrenches.

All of our machines have hollow spindles, permitting any length of thread to be cut.

All parts are made interchangeable. This includes the boxes for the back shaft, a most desirable feature.

OPENING DIE BOLT CUTTERS AND NUT TAPPERS.



CUT OF SECTIONAL DRAWING OF OPEN DIE HEAD WITH DIMENSIONS LETTERED.

OPENING DIE BOLT CUTTERS AND NUT TAPPERS.

THE NEW "LITTLE GIANT" OPENING DIE HEAD.

THE Die Head, a most important part of an Opening Die Bolt Cutter, is made with the wearing parts of tool steel, hardened and ground.

It is short, bringing the chasers so near the spindle bearing that it is particularly firm in operation.

Die-Head has two adjustments, fine and coarse.

The fine adjustment is accomplished by means of the adjusting screw in the face plate. The circle about this screw is graduated into ten parts and numbered 1 to 10. A part turn of this screw from one graduation to the next, changes cutting size of the die .001 inch, and one complete turn of the screw changes cutting size .010 inch.

The circle surrounding the adjusting screw is also marked with arrows lettered SMALL and LARGE, indicating direction screw is to be turned to decrease or increase cutting size.

The adjusting screw should not be used for adjustments of more than .020 inch over or under size.

OPENING DIE BOLT CUTTERS AND NUT TAPPERS.

THE OPENING DIE HEAD. (CONTINUED.)

THE coarse adjustment, giving the wider range of variation, is managed by loosening the two square headed screws connecting the back with the cam-ring, then turning the cam-ring enough to get the variation desired, being sure to tighten the square headed screws before using.

Each space between consecutive graduation lines on EDGE of face plate represents .005 inch in the cutting size of the die.

New dies cut exact to size when the cam-ring is set at O and the adjusting screw is two full turns below the surface of the face-plate.

The chasers are backed by the large solid steel cam-ring for a bearing, this bearing being directly opposite the cutting part of the chasers insures rigid accuracy and uniformity of size.

The chasers are easily removed and changed. They are easily sharpened and are made for long life and high speed.

No re-adjustment is necessary when changing the various sizes of chasers fitting in the die-head.

OPENING DIE
BOLT CUTTERS AND NUT TAPPERS.

THE two cuts on opposite page show side view of die head and shows the parts where head is closed and open.

By comparing these views with the sectional drawing on page 195 the action will be easily discernable.

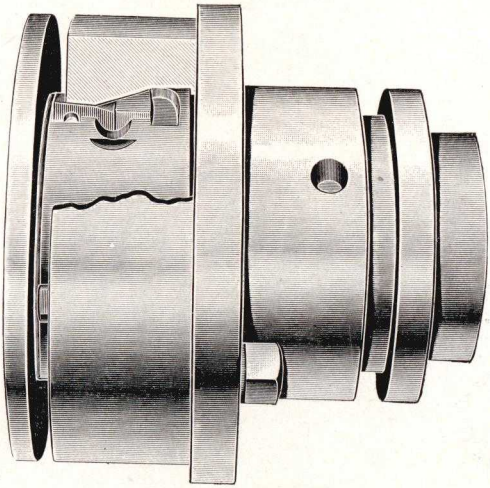
When the cam ring is forced back it moves the chaser lever down and the other end of the chaser has the same action on the chaser itself only moving it out thus opening the dies.

The dies being beveled, when the cam ring is pushed forward the action of the ring on the die forces it in and allows the chaser lever to move back in under the ring.

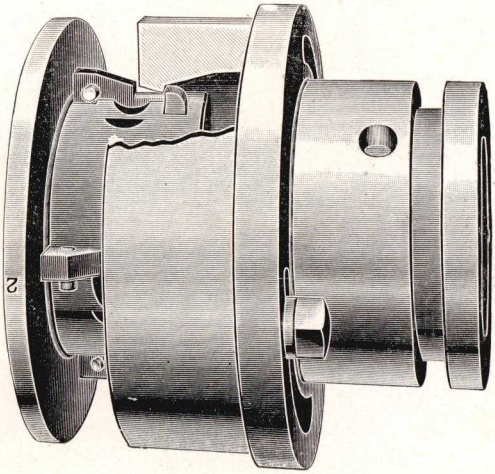
This method is simple yet as effective as the more complicated ways.

This simplicity at the same time allows the proper stock being left to insure all the strength necessary.

OPENING DIE BOLT CUTTERS AND NUT TAPPERS.

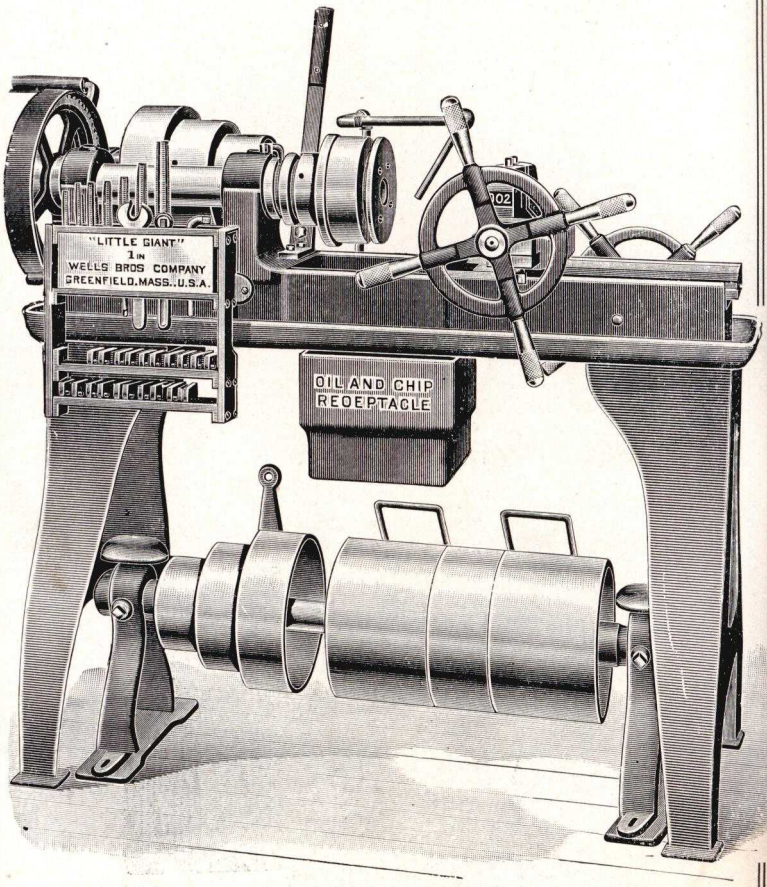


DIE HEAD, CLOSED.



DIE HEAD, OPEN.

OPENING DIE
BOLT CUTTERS AND NUT TAPPERS.



1 Inch "Little Giant" Bolt Cutter with Hand Opening Die Head.

Little Giant.

OPENING DIE BOLT CUTTERS AND NUT TAPPERS.

1 INCH
NEW "LITTLE GIANT" BOLT CUTTER WITH HAND OPENING DIE HEAD.

Capacity ¼ to 1 inch Bolts and Nuts, ¼ to 1 inch Pipe. Right and Left Hand. Cone Pulley 6, 8 and 10 inches in diameter for 3 inch Belt. Speed of countershaft with 10 by 3 inch pulleys, 250 revolutions per minute. Geared 5 to 1. Machine furnished with Oil Pump and Tank, Gear Guards, Die Head, Tap Holding Jaws,

Dies and Machine Nut Taps, cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8}

Machine as above with friction countershaft **$190.00**

Machine as above with Plain countershaft **180.00**

Machine as above without countershaft **165.00**

Right Hand Pipe Dies fitting above Die Head, cutting ⅛, ¼, ⅜, ½, ¾, 1, extra **$15.00**

"V" oversize threads are sent unless otherwise ordered.

U. S. S. and Whitworth threads furnished at same prices.

For prices of Taps and Dies separately, see pages 206 and 208

For description of Die Head and other parts, see pages 193 and 199.

APPROXIMATE WEIGHTS AND MEASUREMENTS.

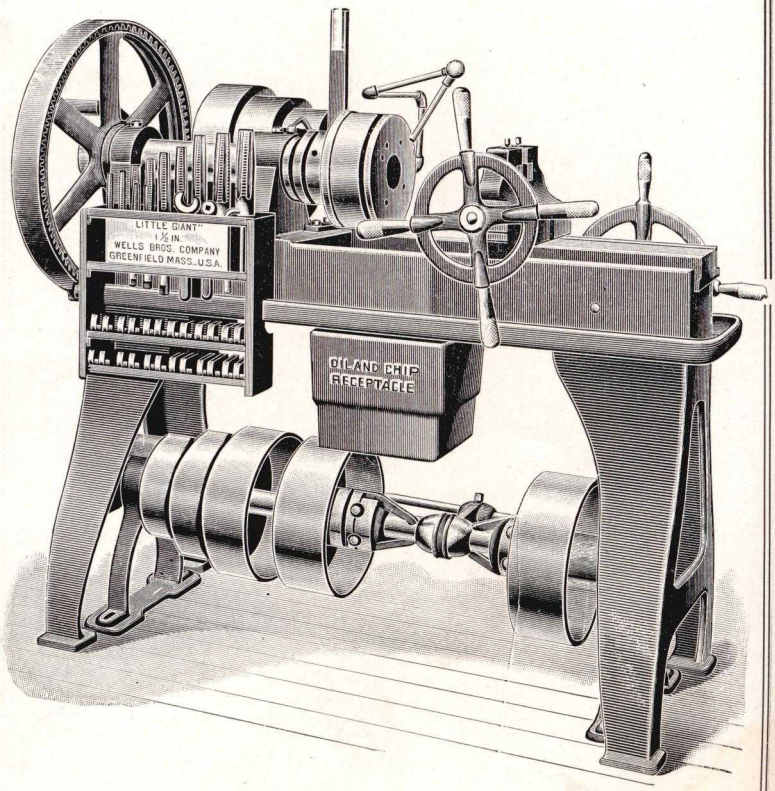
Net 750 lbs. Crated for domestic shipment, 900 lbs.

Boxed for export shipment 1000 lbs.

Dimensions boxed 52 by 44 by 24 inches.

Floor space 52 by 24 inches.

OPENING DIE
BOLT CUTTERS AND NUT TAPPERS.



1½ Inch "Little Giant" Bolt Cutter with Hand Opening Die Head.

OPENING DIE
BOLT CUTTERS AND NUT TAPPERS.

1½ INCH
"LITTLE GIANT" BOLT CUTTER WITH HAND OPENING DIE HEAD.

Capacity ¼ to 1½ inch bolts and nuts and ¼ to 2 inch Pipe. Cone Pulley 8, 10 and 12 inches diameter for 3½ inch belt. Speed of countershaft with 12 by 4 inch pulleys 300 revolutions per minute.

Geared 8 to 1.

Machine furnished with Oil Pump and Tank, Gear Guards, Die Head, Dies, Tap Holding Jaws and Machine Nut Taps, Cutting $\frac{1}{4}^{20}$, $\frac{5}{16}^{18}$, $\frac{3}{8}^{16}$, $\frac{7}{16}^{14}$, $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$ $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8}, $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$, $1\frac{3}{8}^{6}$, $1\frac{1}{2}^{6}$

Machine as above with friction countershaft **$250.00**

Machine as above with plain countershaft **240.00**

Machine as above without countershaft **225.00**

Right Hand Pipe Dies fitting above Die Head cutting

¼, ⅜, ½, ¾, 1, 1¼, 1½, 2..... **$24.00**

"V" oversize threads sent unless otherwise ordered.

U. S. S. and Whitworth threads sent at same prices.

For prices on Dies and Taps separately, see pages 206 and 208.

For description of Die Head and parts see pages 193 and 199.

APPROXIMATE WEIGHTS AND MEASUREMENTS.

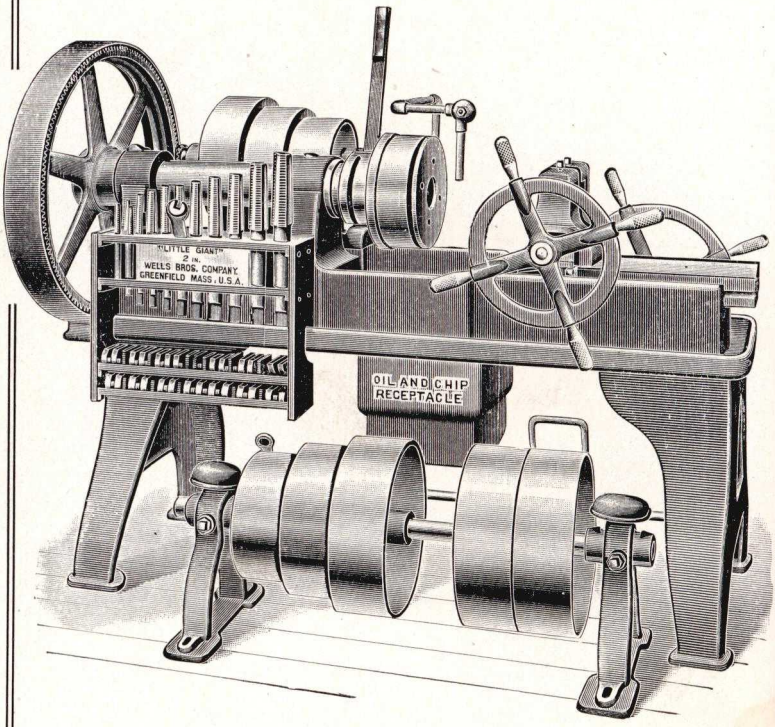
Weights—Net 1150 lbs. Crated for domestic shipment 1350 lbs.

Boxed for export 1500 lbs.

Dimensions boxed 58 by 48 by 30 inches.

Floor space 58 by 30 inches.

OPENING DIE
BOLT CUTTERS AND NUT TAPPERS.



2 Inch "Little Giant" Bolt Cutter with Hand Opening Die Head.

OPENING DIE
BOLT CUTTERS AND NUT TAPPERS.

2 INCH
"LITTLE GIANT" BOLT CUTTER WITH HAND OPENING DIE HEAD

Capacity ½ to 2 inch bolts and nuts and ¼ to 2 inch pipe, right and left hand. Cone pulley 10, 12 and 14 inches diameter for 4 inch belt. Speed of countershaft with 14 by 4 inch pulleys 300 revolutions per minute.

Geared 12 to 1.

Machine furnished with Oil Pump and Tank, Gear Guards Die Head, Dies, Tap Holding Jaws and Machine Nut Taps, cutting $\frac{1}{2}^{12}$, $\frac{5}{8}^{11}$, $\frac{3}{4}^{10}$, $\frac{7}{8}^{9}$, 1^{8}, $1\frac{1}{8}^{7}$, $1\frac{1}{4}^{7}$, $1\frac{3}{8}^{6}$ $1\frac{1}{2}^{6}$, $1\frac{3}{4}^{5}$, $2^{4\frac{1}{2}}$.

Machine as above with friction countershaft **$335.00**

Machine as above with plain countershaft **325.00**

Machine as above without countershaft **300.00**

Right Hand Pipe Dies fitting above Die Head, cutting ¼, ⅜, ½, ¾, 1, 1¼, 1½, 2 ..... **$32.00**

"V" oversize threads sent unless otherwise ordered.

U. S. S. and Whitworth threads furnished at same prices.

For prices of Dies and Taps separately, see pages 206 and 208.

For description of Die Head and parts, see pages 193 and 199.

APPROXIMATE WEIGHTS AND MEASUREMENTS.

Weights—Net, 1500 lbs. Crated for domestic shipment, 1800 lbs. Boxed for export shipment, 2000 lbs.

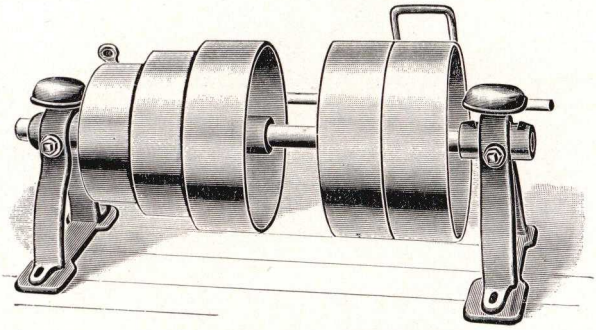
Dimensions boxed 66 by 50 by 32 inches.

Floor space, 66 by 32 inches.

Little Giant.

COUNTERSHAFTS.

PLAIN COUNTERSHAFT FOR OPEN DIE BOLT CUTTERS.



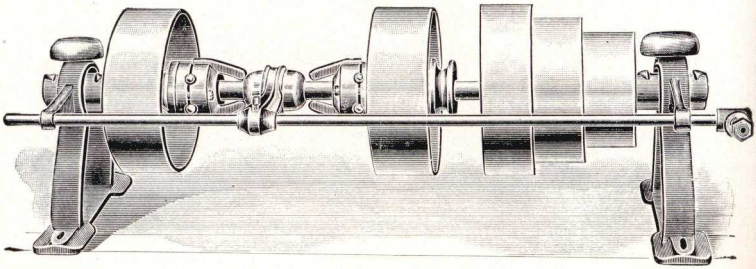
PLAIN COUNTERSHAFTS.

These countershafts are made up similar to our countershafts used on the Adjustable Die Bolt Cutters, but are heavier and by far more suitable for the open Die Bolt Cutters.

	Diam. of Pulley	Width of Face.	
For 1 inch machine	10	3	**$15.00**
" 1½ " "	12	4	**15.00**
" 2 " "	14	4	**25.00**

Above prices include cone pulley suitable for machine, with which it is to be used.

FRICTION COUNTERSHAFT FOR OPEN DIE BOLT CUTTER.



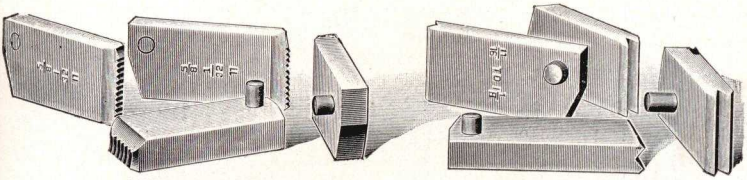
PRICES FRICTION COUNTERSHAFT.

	Diam. of Pulley	Width of Face	
For 1 inch machine	10	3	**$25.00**
" 1½ " "	12	4	**35.00**
" 2 " "	14	4	**35.00**

Above prices include cone pulley suitable for machine, with which it is to be used.

Little Giant.

OPENING DIE BOLT CUTTERS AND NUT TAPPERS.



DIE LANDS TAP JAWS

DIMENSIONS OF CHASERS.

Die Head	Width	Thickness
1 inch	1 inch	3/8 inch
1½ inch	1¼ inches	½ inch
2 inch	1½ inches	5/8 inch

Each Die is composed of four chasers. (See cut.) The chasers are numbered from 1 to 4 indicating the order in which they should be placed in Die Head.

PRICE LIST OF DIES.

Dies fitting 1 inch Die Head, per set **$2.50**
" " 1½ " " " " " **3.00**
" " 2 " " " " " **4.00**

These prices apply to regular sizes and threads only. For sizes and threads see next page.

PRICE LIST OF TAP JAWS.

Number in Set	Capacity, Taps	Price Per Set 1 inch Bolt Cutter	Price Per Set 1½ inch Bolt Cutter	Price Per Set 2 inch Bolt Cutter
2	¼ to 5/16 inch	1.25	1.50	
2	3/8 to 5/8 inch	2.25	1.50	2.00
4	¾ to 1 inch	2.50	3.00	4.00
4	1⅛ to 1½ inch		3.00	4.00
4	1⅝ to 2 inch			4.00

Little Giant.

PRICE LIST OF TAPS FOR "LITTLE GIANT" BOLT CUTTERS.

We will furnish Taps and Dies of the following sizes and threads at regular prices. All others are special. For prices on Dies see pages 188 and 207.

Size	Length	U. S. S.	"V"	Whitworth	V Threads also furnished	Price
3/16	4½	*32	24	*24	32	$0.60
¼	5	20	20	20	24	.60
5/16	5½	18	18	18	16, 20, 24	.70
⅜	6	16	16	16	14, 18	.80
7/16	6½	14	14	14	12, 16	.90
½	7	*13	12	12	13	1.00
9/16	7½	12	12	12	14	1.15
⅝	8	11	11	11	10, 12	1.30
11/16	8½	11	11	11	12	1.45
¾	9	10	10	10	12	1.60
13/16	9½	10	10	10	12	1.80
⅞	10	9	9	9	10, 12	2.10
15/16	10½	9	9	9	12	2.40
1	11	8	8	8	12	2.80
1 1/16	11	8	8			3.00
1⅛	11½	7	7	7	8	3.20
1 3/16	11½	7	7			3.45
1¼	12	7	7	7		3.70
1 5/16	12	7	7			3.95
1⅜	12½	6	6	6		4.20
1 7/16	12½	6	6			4.45
1½	13	6	6	6		4.70
1⅝	13½	5½	5	5		5.30
1¾	14	5	5	5		6.00
1⅞	14½	5	4½	4½		6.80
2	15	4½	4½	4½		7.70

All orders will be filled with "V" oversize threads unless otherwise ordered.

Left Hand Machine Nut Taps of standard size and pitch ¼ to 2 inches diameter furnished at regular prices.

*We also furnish at regular list and discount 3/16 inch Machine Nut Taps with 24 threads to the inch United States Standard form and 3/16 inch Machine Nut Taps with 32 threads to the inch Whitworth Standard form. Also ½-inch Machine Nut Taps, both exact and rough iron sizes 12 threads to the inch, United States Standard form.

SECTION IX.

PAGES 209 TO 222.

MISCELLANEOUS.

RATCHET WRENCHES.
TAP WRENCHES.
HOLLOW MILLING TOOLS.
BOLT POINTERS.
CHUCKS.
DIE HOLDERS.
DRILL HOLDERS.
BIT BRACE NUT WRENCHES.
TIRE WHEELS.
HORSESHOERS' BUTTERIS.
STOCKS.

RATCHET WRENCHES.

FIG. I
RATCHET
NUT
WRENCHES

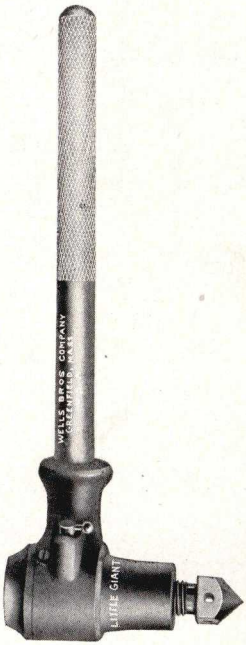
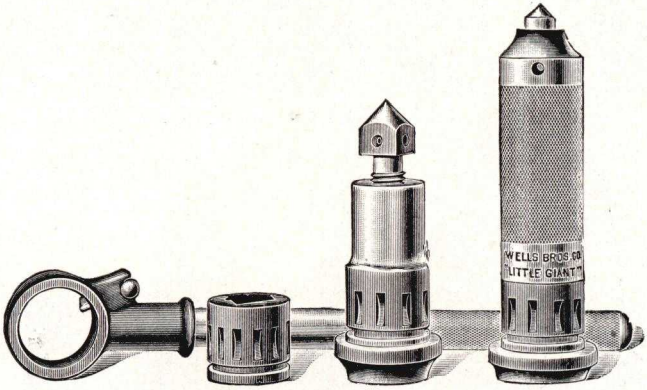


FIG. II
BOILER RATCHET
DRILL
WRENCHES

FIG. III
TAPER SHANK DRILL
RATCHET
WRENCHES

For prices see page 213.

RATCHET WRENCHES.



RATCHET WRENCHES.

These wrenches are particularly adapted to the use of Bridge Builders, Ship Builders, Boiler Makers, Carriage Makers, Blacksmiths, Railroad and Iron Construction work. They will also be found useful in various other trades.

There are five different size handles. Each handle holds a socket of each style., i.e., Handles on wrenches Nos. 2, 22 and 32 are the same.

If one handle is wanted with three different heads take price of parts.

ALL WRENCHES ARE REVERSIBLE.

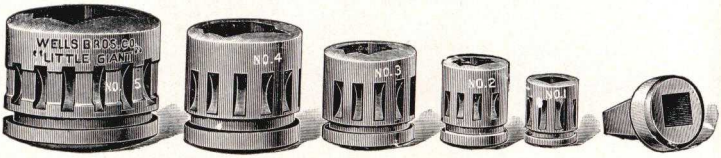
Reverse motion is instantly obtainable by simply turning pawl from one side to the other. It is not necessary to remove wrench from work.

Nos. 22 to 25 have Taper Shank sleeve for holding drills with Taper Shanks.

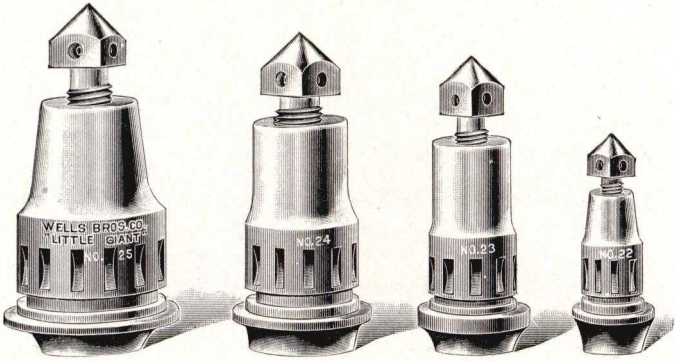
For prices see page 213.

Little Giant.

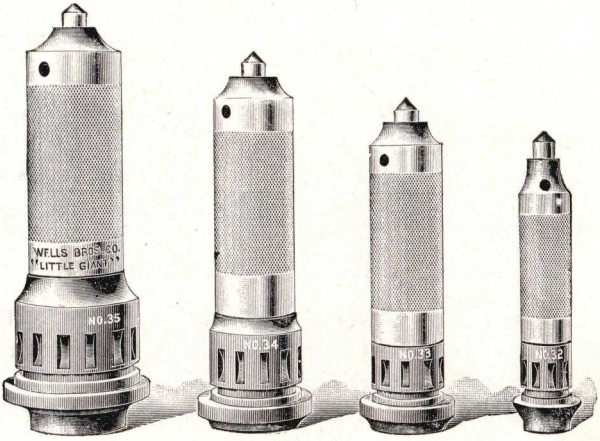
RATCHET WRENCHES.



Sockets for Ratchet Nut Wrenches, Fig. I page 210.



Sockets for Boiler Ratchet Drill Wrenches, Fig. II page 210.



Sockets for Taper Shank Drill Ratchet Wrenches, Fig. III page 210.
For price list see page 213.

Little Giant.

RATCHET WRENCHES.

PRICE LIST.

RATCHET NUT WRENCHES, FIG. I, Pages 210 and 212.

Number	Size of Squares	Length	Price Handle	Price Socket	Price Complete
1	Squares $\frac{7}{16}$ and $\frac{1}{2}$	8	$0.50	$0.50	$1.00
2	" $\frac{5}{8}$ " $\frac{11}{16}$	10	.75	.50	1.25
3	" $1\frac{13}{16}$ " $\frac{7}{8}$	13	1.00	.75	1.75
4	" $1\frac{1}{8}$ " $1\frac{1}{4}$	16	1.75	1.00	2.75
5	" $1\frac{7}{16}$ " $1\frac{5}{16}$	20½	2.50	1.25	3.75

BOILER RATCHET DRILL WRENCHES FIG. II, pages 210 and 212.

22		10	$0.75	$1.50	$2.25
23		13	1.00	1.75	2.75
24		16	1.75	2.00	3.75
25		20½	2.50	2.25	4.75

TAPER SHANK DRILL, RATCHET WRENCHES, FIG. III, pages 210 and 212.

32	Takes No. 1 Taper Shank	10	$0.75	$1.75	$2.50
33	" No. 2 " "	13	1.00	2.00	3.00
34	" No. 3 " "	16	1.75	2.25	4.00
35	" No. 4 " "	20½	2.50	2.50	5.00

RATCHET TAPER SHANK REDUCERS, ... .50

There are five different sizes of handles. With the exception of No. 1 each handle holds a socket of each style.

If one handle is wanted with other style sockets, add price of parts as given in above list.

Little Giant.

ADJUSTABLE TAP WRENCH.

FOR PIPE TAPS AND REAMERS.

An adjustable wrench made upon the lines of those used by mechanics for hand taps, having large enough capacity for holding

Pipe Taps and Reamers.

has long been wanted by up-to-date mechanics. We undertake to supply this demand, and although we do not claim these to be the cheapest made, we do keep our prices very close to the less expensive and yet furnish wrenches of superior quality, and at the same time retain our reputation as makers of fine tools.

These wrenches are made in three sizes, holding ¼ to 4 inches, inclusive.

LIST OF SIZES AND PRICES.

No. 20

	Price.
Holds pipe taps ¼ to 1 inch	**$7.00**

Length over all, 42 inches.

No. 22

Holds pipe taps 1 to 2 inches	**15.00**

Length over all 56 inches

No. 24

Holds pipe taps 2 to 4 inches	**25.00**

Length over all 72 inches.

Handles are pipe, making them light, and are of sufficient length to give plenty of leverage for sizes.

JAWS MADE OF BEST CAST STEEL.

Little Giant.

ADJUSTABLE TAP WRENCHES.

FOR MACHINISTS' TAPS

An adjustable tap and reamer wrench, at a reasonable price, is what we here illustrate.

JAWS MADE OF BEST TOOL STEEL.

Because these wrenches are cheap in price, do not think they are cheap in quality. We fully warrant them equal to any made. They are light, strong, and durable. Workmanship of the highest order.

They are made from drop forgings.

PRICES.

Size No. 00. Length 5 inches, for taps $\frac{3}{16}$ and smaller **$1.25**

Size No. 0. Length 7 inches, for taps $\frac{1}{16}$ to $\frac{1}{4}$ inch **1.50**

Size No. 5. Length $10\frac{1}{2}$ inches, for taps $\frac{3}{16}$ to $\frac{1}{2}$ inch **2.00**

Size No. 6. Length 15 inches, for taps $\frac{1}{4}$ to $\frac{3}{4}$ inch **2.50**

Size No. 7. Length 20 inches, for taps $\frac{3}{8}$ to 1 inch **3.50**

Size No. $7\frac{1}{2}$. Length 30 inches, for taps $\frac{3}{8}$ to $1\frac{1}{4}$ inch **6.50**

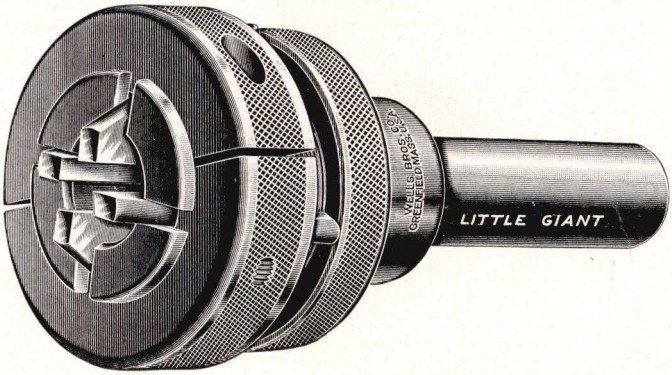
Size No. 8. Length 42 inches, for taps $\frac{3}{4}$ to $1\frac{1}{2}$ inches **8.00**

These wrenches are acknowledged by those who have used them to be superior to all other styles in the market.

"LITTLE GIANT" SCREW PLATES ARE NOW FURNISHED WITH THIS STYLE WRENCH.

Little Giant.

ADJUSTABLE HOLLOW MILLING TOOLS.



We take pleasure in presenting our LATEST IMPROVED Milling Tool for use in turrets of screw machines. These tools, have been in constant use in our factories for some years and all weak points in their construction have been overcome until now we believe we have a perfect tool. The cutters are easily and quickly adjusted, and are made of the finest quality of steel. Perfect in design and workmanship.

LIST OF SIZES AND PRICES.

Number of Tool	1	2	3	4
Cutting Size	1/4	1/2	3/4	1
Outside Diameter	2 1/2	2 3/4	3 1/2	4
Diameter of Shank	3/4	1	1 1/4	2
Price of complete Tool	$11.00	$13.50	$15.00	$18.50
Price of Cutters per set	$1.00	$1.25	$1.50	$1.50

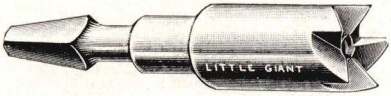
When ordering give number of Tool as well as size of set of cutters.

When ordering new cutters be sure to state number of tool for which they are wanted.

Little Giant.

BIT BRACE BOLT POINTER.

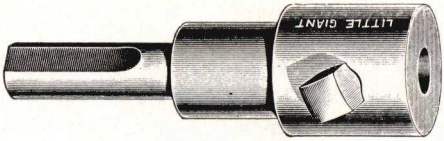
FOR ROUNDING OVER ENDS OF ROUND IRON BARS.



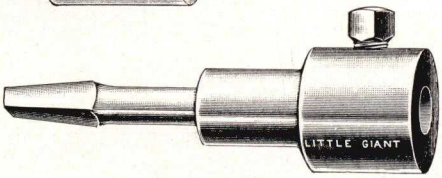
A convenient tool; will round over ends of bars to ½ inch diameter.

	Price.
Each	**$0.75**

CHUCKS OR HOLDERS.



½ in. or $\frac{41}{64}$ Shanks.



Bit Brace Shanks.

To hold drills, drill holders, and other tools having round shanks, ½ inch or $\frac{41}{64}$ inch in diameter.

We supply these holders with ½ inch and $\frac{41}{64}$ round shanks, instead of brace shanks, if desired.

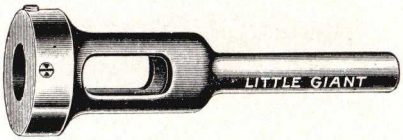
	Price.
Each	**$0.75**

☞ When ordering, please state what style of shank is wanted. Unless stated, bit brace shanks will be sent.

Little Giant

"LITTLE GIANT" DIE HOLDERS.

FOR USE IN LATHE OR TURRET OF SCREW MACHINE.



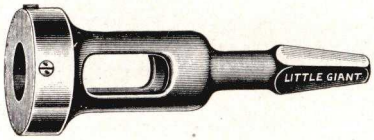
		Price.
No. 1.	Holding Round Adjustable Dies, $\frac{5}{8}$ inch diameter....	**$0.50**
	The shanks of the No. 1 Holders are $\frac{1}{2}$ inch diameter.	
No. 2.	Holding Round Adjustable Dies, $\frac{13}{16}$ inch diameter....	**.50**
	The shanks of the No. 2 Holders are $\frac{1}{2}$, $\frac{9}{16}$, and $\frac{11}{16}$ inch diameter.	
No. 3.	Holding Round Adjustable Dies, 1 inch diameter.....	**.75**
	The shanks of the No. 3 Holders are $\frac{1}{2}$, $\frac{9}{16}$, and $\frac{11}{16}$ inch diameter.	
No. 4.	Holding Round Adjustable Dies, $1\frac{5}{16}$ inch diameter...	**1.50**
	The shanks of the No. 4 Holders are $\frac{11}{16}$, $\frac{3}{4}$, and $\frac{13}{16}$ inch diameter.	
No. 5.	Holding Round Adjustable Dies, $1\frac{9}{16}$ inch diameter ..	**2.75**
	The shanks of the No. 5 Holders are $\frac{3}{4}$, $\frac{13}{16}$, and 1 inch diameter.	
No. 6.	Holding Round Adjustable Dies, $2\frac{1}{4}$ inches diameter	**4.00**
	The shanks of the No. 6 Holders are $1\frac{1}{8}$, $1\frac{1}{8}$, and $1\frac{1}{4}$ inch diameter.	

The above prices are for the Holders only.

The list prices of Dies fitting these Holders will be found on pages 88 to 91.

In ordering these Holders, mention which size shank is desired.

FOR BIT BRACE USE.



		Price.
No. 1.	Holding Round Adjustable Dies, $\frac{5}{8}$ inch diameter....	**$0.75**
No. 2.	Holding Round Adjustable Dies, $\frac{13}{16}$ inch diameter....	**.75**
No. 3.	Holding Round Adjustable Dies, 1 inch diameter.....	**1.00**

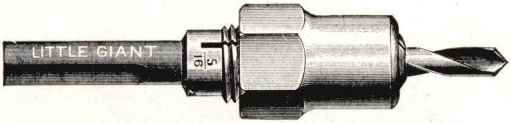
The above prices are for the Holders only.

Dies fitting these Holders will be found listed on pages 88, 89 and 90.

Little Giant.

DRILL HOLDERS.

FOR HOLDING STRAIGHT SHANK DRILLS.



With Shanks $\frac{1}{2}$ or $\frac{41}{64}$ Diameter.

PRICES AND SIZES.

Each

For holding drills $\frac{1}{8}$, $\frac{5}{32}$, $\frac{3}{16}$, $\frac{7}{32}$, $\frac{1}{4}$, $\frac{9}{32}$, $\frac{5}{16}$, $\frac{11}{32}$, $\frac{3}{8}$, $\frac{13}{32}$, $\frac{7}{16}$, $\frac{15}{32}$, ... **$0.70**

We send $\frac{1}{2}$ shanks, if not otherwise ordered.

This will be found not only USEFUL, but a MONEY-SAVING tool.

Useful, because it is always ready with drill set for use.

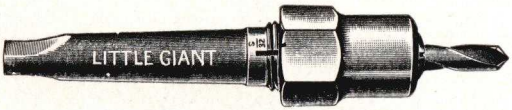
Will save you money, because you can buy straight shank drills for less than half the price of half-inch shank drills.

Will save you money, because you can take so short a bite on drill, that, should it break, you would yet have a part of drill saved.

Will save you money, because you can use up what broken drills you may have on hand.

It requires a holder for each size drill.

DRILL HOLDERS.



With Taper Shanks.

Each

For holding drills $\frac{1}{8}$, $\frac{5}{32}$, $\frac{3}{16}$, $\frac{7}{32}$, $\frac{1}{4}$, $\frac{9}{32}$, $\frac{5}{16}$, $\frac{11}{32}$, $\frac{3}{8}$, $\frac{13}{32}$, $\frac{7}{16}$, $\frac{15}{32}$, ... **$0.85**

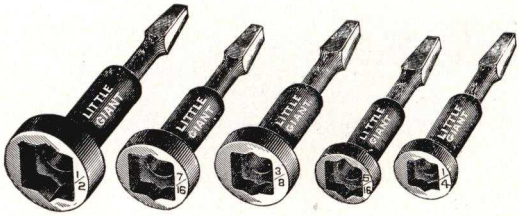
Unless otherwise ordered, these will be sent with No. 2 Morse Taper. Other standard Tapers furnished at special prices.

Little Giant.

NUT WRENCHES.

FOR BIT BRACE USE.

FOR SQUARE OR HEXAGON NUTS.

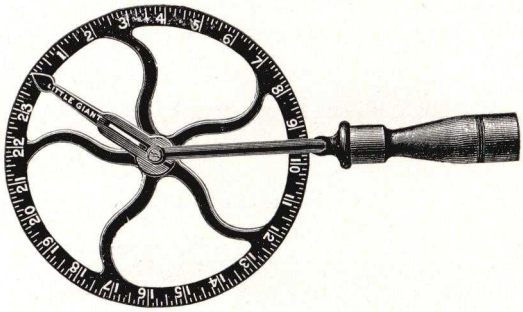


For putting on and taking off nuts in carriage work. For tapping nuts, etc., these wrenches have become almost indispensable, and every carriage shop should have them.

	Price
Set of Wrenches for five nuts, $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, and $\frac{1}{2}$ inch	$0.75

GRADUATED TIRE WHEEL.

Has cherry wood handle. Other parts are made of malleable iron finely polished.



A perfectly true Running Wheel.

A durable and convenient tool for measuring lengths of tires accurately. The pointer is held in place by friction, so that it can be set instantly, and will not get loose.

It is light, accurately made, and strong. The circumference of wheel is exactly two feet, graduated by one eighth of an inch.

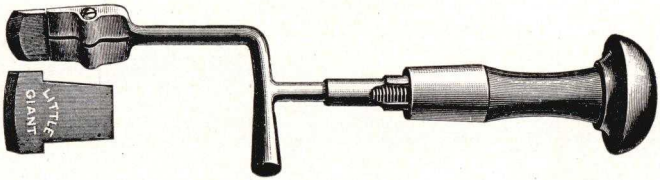
	Price.
Graduated.....	$1.50
Plain	1.25

Little Giant.

HORSE SHOERS' BUTTERIS.

This useful tool will be highly appreciated by all horse-shoers. Perfect in design, strong, durable and cheap.

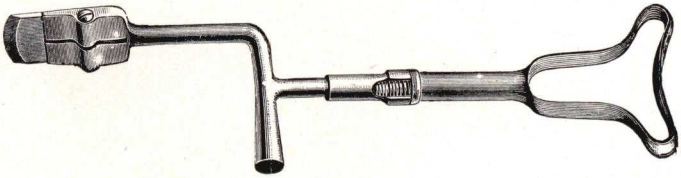
Ebony Wood Handle.



Handles adjustable to length. Knives replaceable.

Malleable Iron Brace, mottled finish.

Malleable Iron Handle.



	Price
Butteris, with Ebony Handle	**$1.50**
Butteris, with Crutch Handle	**1.50**
Extra Knives	**.25**

Making it the cheapest butteris for repairs in the market.

Little Giant.

STOCKS.

PRICE LIST OF STOCKS HOLDING ROUND SOLID AND ROUND ADJUSTABLE DIES.

No. B	for	5/8″	Diam.	Dies,	Length	5 inches	.....	**$0.50**
No. D	"	13/16″	"	"	"	6 "	.....	**.75**
No. F	"	1″	"	"	"	9 "	.....	**1.00**
No. G	"	1 5/16	"	"	"	14 "	.....	**1.25**
No. H	"	1 9/16	"	"	"	18 "	.....	**1.50**
No. K	"	1 15/32″	"	"	"	14 "	.....	**2.00**
No. M	"	1 1/2″	"	"	"	14 "	.....	**2.00**

We sell these stocks in large quantities. They will fit any make of Die of above diameter.

For prices on Dies fitting these stocks, see pages 88 to 91.

STOCKS FOR SCREW PLATES.

For prices on Stocks furnished with "Little Giant" Screw Plates, see price list of parts page 31.

SECTION X.

PAGES 223 TO 250.

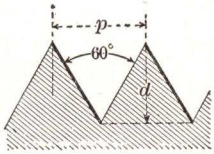
TABLES OF INFORMATION.

WE GIVE ON THE FOLLOWING PAGES TABLES AND SUCH OTHER INFORMATION AS WE THINK MAY BE OF VALUE. THE TABLES GIVEN ARE TAKEN FROM SOURCES WHICH WE THINK RELIABLE, BUT OF COURSE WE DO NOT GUARANTEE THEM.

APPROXIMATE SIZES IN INCHES OF MACHINE SCREW TAPS.

Size of Screw Gauge	Approximate Size in Inches	Size of Screw Gauges	Approximate Size in Inches
No. 1	$\frac{1}{16}$	13	
$1\frac{1}{2}$		14	$\frac{1}{4}$
2	$\frac{5}{64}$	15	
3		16	$\frac{17}{64}$
4	$\frac{7}{64}$	18	$\frac{9}{32}$
5		20	$\frac{5}{16}$
6	$\frac{9}{64}$	22	
7		24	$\frac{3}{8}$
8	$\frac{5}{32}$	26	
9		28	
10	$\frac{3}{16}$	30	$\frac{7}{16}$
11			
12	$\frac{7}{32}$		

SHARP "V" THREAD.

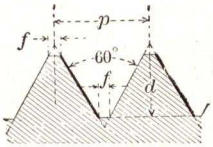


Formula $\begin{cases} p = \text{pitch} = \dfrac{1}{\text{No. threads to inch}} \\ d = \text{depth} = p \times .8660 \end{cases}$

Diameter	No. Threads Per Inch	Diameter	No. Threads Per Inch
1/4	20	1 5/8	5
5/16	18	1 3/4	5
3/8	16	1 7/8	4 1/2
7/16	14	2	4 1/2
1/2	12	2 1/8	4 1/2
9/16	12	2 1/4	4 1/2
5/8	11	2 3/8	4 1/2
11/16	11	2 1/2	4
3/4	10	2 5/8	4
13/16	10	2 3/4	4
7/8	9	2 7/8	4
15/16	9	3	3 1/2
1	8	3 1/8	3 1/2
1 1/8	7	3 1/4	3 1/2
1 1/4	7	3 3/8	3 1/4
1 3/8	6	3 1/2	3 1/4
1 1/2	6	3 5/8	3 1/4
		3 3/4	3
		3 7/8	3
		4	3

For diameters less than 1/4" there is no recognized standard number of "V" threads to the inch; but for the convenience of our customers in ordering goods, we are specifying throughout this catalog, under the head of "V" Standard, the threads most commonly used for such sizes.

UNITED STATES STANDARD THREAD.



Formula
$$\begin{cases} p = \text{pitch} = \dfrac{1}{\text{No. threads per inch}} \\ d = \text{depth} = p \times .6495 \\ f = \text{flat} = \dfrac{p}{8} \end{cases}$$

Diameter	No. Threads Per Inch	Diameter	No. Threads Per Inch	Diameter	No. Threads Per Inch
1/4	20	2	4 1/2	4 1/8	2 7/8
5/16	18	2 1/8	4 1/2	4 1/4	2 7/8
3/8	16	2 1/4	4 1/2	4 3/8	2 3/4
7/16	14	2 3/8	4	4 1/2	2 3/4
1/2	13	2 1/2	4	4 5/8	2 5/8
9/16	12	2 5/8	4	4 3/4	2 5/8
5/8	11	2 3/4	4	4 7/8	2 5/8
3/4	10	2 7/8	3 1/2	5	2 1/2
7/8	9	3	3 1/2	5 1/8	2 1/2
1	8	3 1/8	3 1/2	5 1/4	2 1/2
1 1/8	7	3 1/4	3 1/2	5 3/8	2 3/8
1 1/4	7	3 3/8	3 1/4	5 1/2	2 3/8
1 3/8	6	3 1/2	3 1/4	5 5/8	2 3/8
1 1/2	6	3 5/8	3 1/4	5 3/4	2 3/8
1 5/8	5 1/2	3 3/4	3	5 7/8	2 1/4
1 3/4	5	3 7/8	3	6	2 1/4
1 7/8	5	4	3		

Because of the continued demand for Taps and Dies with United States Standard form of thread in diameters $\frac{11}{16}$, $\frac{13}{16}$, and $\frac{15}{16}$, we have listed them throughout this catalog, except in the above table, with 11, 10 and 9 threads to the inch, respectively, although it is understood that under the Sellers or United States Standard formula, strictly followed, they should be 10–9 and 8 respectively.

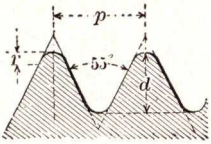
Little Giant.

U. S. STANDARD SCREW THREADS.

Diameter of Screw	Threads to Inch	Diameter at Root of Thread	Width of Flat
1/4	20	.185	.0063
5/16	18	.2403	.0069
3/8	16	.2936	.0078
7/16	14	.3447	.0089
1/2	13	.4001	.0096
9/16	12	.4542	.0104
5/8	11	.5069	.0114
3/4	10	.6201	.0125
7/8	9	.7307	.0139
1	8	.8376	.0156
1 1/8	7	.9394	.0179
1 1/4	7	1.0644	.0179
1 3/8	6	1.1585	.0208
1 1/2	6	1.2835	.0208
1 5/8	5 1/2	1.3888	.0227
1 3/4	5	1.4902	.0250
1 7/8	5	1.6152	.0250
2	4 1/2	1.7113	.0278
2 1/4	4 1/2	1.9613	.0278
2 1/2	4	2.1752	.0313
2 3/4	4	2.4252	.0313
3	3 1/2	2.6288	.0357
3 1/4	3 1/2	2.8788	.0357
3 1/2	3 1/4	3.1003	.0385
3 3/4	3	3.3170	.0417
4	3	3.5670	.0417
4 1/4	2 7/8	3.7982	.0435
4 1/2	2 3/4	4.0276	.0455
4 3/4	2 5/8	4.2551	.0476
5	2 1/2	4.4804	.0500
5 1/4	2 1/2	4.7304	.0500
5 1/2	2 3/8	4.9530	.0526
5 3/4	2 3/8	5.2030	.0526
6	2 1/4	5.4226	.0556

Little Giant.

WHITWORTH STANDARD THREAD.



Formula

$$p = \text{pitch} = \frac{1}{\text{No. threads per inch}}$$
$$d = \text{depth} = p \times .64933$$
$$r = \text{radius} = p \times .1373$$

Diameter	No. Threads per Inch	Diameter	No. Threads Per Inch
1/4	20	1 5/8	5
5/16	18	1 3/4	5
3/8	16	1 7/8	4 1/2
7/16	14	2	4 1/2
1/2	12	2 1/8	4 1/2
9/16	12	2 1/4	4
5/8	11	2 3/8	4
11/16	11	2 1/2	4
3/4	10	2 5/8	4
13/16	10	2 3/4	3 1/2
7/8	9	2 7/8	3 1/2
15/16	9	3	3 1/2
1	8	3 1/8	3 1/2
1 1/8	7	3 1/4	3 1/4
1 1/4	7	3 3/8	3 1/4
1 3/8	6	3 1/2	3 1/4
1 1/2	6	3 5/8	3 1/4
		3 3/4	3
		3 7/8	3
		4	3

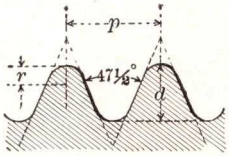
Little Giant

WHITWORTH STANDARD THREADS.

1	2	3	4	5	6	7
Full Diameter	No. of Threads per inch	Pitch	Standard Depth of Thread	Effective Diameter	Core Diameter	Cross Sect'l Area at Bottom of Thd.
1/4 (.25)	20	.0500	.0320	.2180	.1860	.0272
5/16 (.3125)	18	.0556	.0356	.2769	.2414	.0458
3/8 (.375)	16	.0625	.0400	.3350	.2950	.0683
7/16 (.4375)	14	.0714	.0457	.3918	.3460	.0940
1/2 (.5)	12	.0833	.0534	.4466	.3933	.1215
9/16 (.5625)	12	.0833	.0534	.5091	.4558	.1632
5/8 (.625)	11	.0909	.0582	.5668	.5086	.2032
11/16 (.6875)	11	.0909	.0582	.6293	.5711	.2562
3/4 (.75)	10	.1000	.0640	.6860	.6219	.3038
13/16 (.8125)	10	.1000	.0640	.7485	.6844	.3679
7/8 (.875)	9	.1111	.0711	.8039	.7327	.4216
1	8	.1250	.0800	.9200	.8399	.5540
1 1/8 (1.125)	7	.1429	.0915	1.0335	.9420	.6969
1 1/4 (1.25)	7	.1429	.0915	1.1585	1.0670	.8942
1 3/8 (1.375)	6	.1667	.1067	1.2683	1.1616	1.0597
1 1/2 (1.5)	6	.1667	.1067	1.3933	1.2866	1.3001
1 5/8 (1.625)	5	.2000	.1281	1.4969	1.3689	1.4718
1 3/4 (1.75)	5	.2000	.1281	1.6219	1.4939	1.7528
2	4 1/2	.2222	.1423	1.8577	1.7154	2.3111
2 1/4 (2.25)	4	.2500	.1601	2.0899	1.9298	2.9249
2 1/2 (2.5)	4	.2500	.1601	2.3399	2.1798	3.7318
2 3/4 (2.75)	3 1/2	.2857	.1830	2.5670	2.3841	4.4641
3	3 1/2	.2857	.1830	2.8170	2.6341	5.4496
3 1/4 (3.25)	3 1/4	.3077	.1970	3.0530	2.8560	6.4063
3 1/2 (3.50)	3 1/4	.3077	.1970	3.3030	3.1060	7.5.69
3 3/4 (3.75)	3	.3333	.2134	3.5366	3.3231	8.6732
4	3	.3333	.2134	3.7866	3.5731	10.0272
4 1/2 (4.50)	2 7/8	.3478	.2227	4.2773	4.0546	12.9118
5	2 3/4	.3636	.2328	4.7672	4.5343	16.1477
5 1/2 (5.50)	2 5/8	.3810	.2439	5.2561	5.0121	19.7301
6	2 1/2	.4000	.2561	5.7439	5.4877	23.6521

Little Giant.

BRITISH ASSOCIATION SCREW THREADS.



Formula

p = pitch

d = depth = $p \times .6$

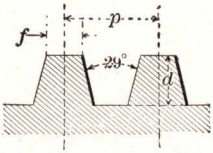
r = radius = $\frac{2 \times p}{11}$

SCHEDULE OF SIZES.

1	2	3	4	5	6	7	8	9
Number	Diameter m/m	Approximate Diameter Inches	Pitch m/m	Approximate Pitch Inches	Depth of Thread	Effective Diameter	Core Diameter	Approx. Cross Sectional Area at Bottom of Thread
0	6.0	.236	.10	.0394	.6	5.4	4.8	18.10
1	5.3	.209	.9	.0354	.54	4.76	4.22	13.99
2	4.7	.185	.81	.0319	.485	4.215	3.73	10.93
3	4.1	.161	.73	.0287	.44	3.66	3.22	8.14
4	3.6	.142	.66	.0260	.395	3.205	2.81	6.20
5	3.2	.126	.59	.0232	.355	2.845	2.49	4.87
6	2.8	.110	.53	.0209	.32	2.48	2.16	3.66
7	2.5	.098	48	.0189	.29	2.21	1.92	2.89
8	2.2	.087	.43	.0169	.26	1.94	1.68	2.22
9	1.9	.075	.39	.0154	.235	1.665	1.43	1.61
10	1.7	.067	.35	.0138	.21	1.49	1.28	1.29
11	1.5	.059	.31	.0122	.185	1.315	1.13	1.00
12	1.3	.051	.28	.0110	.17	1.13	.96	.72
13	1.2	.047	.25	.0098	.15	1.05	.9	.64
14	1.0	.039	.23	.0091	.14	.86	.72	.41
15	.9	.035	.21	.0083	.125	.775	.65	.33
16	.79	.031	.19	.0075	.115	.675	.56	.25
17	.70	.028	.17	.0067	.10	.6	.50	.20
18	.62	.024	.15	.0059	.09	.53	.44	.15
19	.54	.021	.14	.0055	.085	.455	.37	.11
20	.48	.019	.12	.0047	.07	.41	.34	.091
21	.42	.017	.11	.0043	.065	.355	.29	.066
22	.37	.015	.10	.0039	.06	.31	.25	.049
23	.33	.013	.09	.0035	.055	.275	.22	.038
24	.29	.011	.08	.0031	.05	.24	.19	.028
25	.25	.010	.07	.0028	.04	.21	.17	.023

The figures in columns 3, 5 and 9 are given for convenience only, and should, in no case, be worked to where satisfactory interchangeability is required.

THE ACME STANDARD THREAD.



The Acme Standard Thread is an adaption of the most commonly used style of Worm Thread and is intended to take the place of the square thread.

It is a little shallower than the Worm Thread, but the same depth as the square thread and much stronger than the latter.

The various parts of the Acme Standard Thread are obtained as follows:

Width of Point of Tool for Screw or Tap Thread =

$$\frac{.3707}{\text{No. of Threads per inch}} = .0052$$

Width of screw or nut = $\dfrac{.3707}{\text{No. of Threads per inch}}$

Diameter of Tap = Diameter of Screw + .020.

Diameter of Tap or Screw at root =

$$\text{Diameter of Screw} - \left(\frac{1}{\text{No. of Threads per inch}} + .020\right)$$

Depth of Thread = $\dfrac{1}{2 \times \text{No. of Threads per inch}} + .010$

TABLE OF THREAD PARTS.

Number of Threads per inch	Depth of Threads	Width at top of Thread	Width at bottom of Thread	Space at top of Thread	Thickness at Root of Thread
1	.5100	.3707	.3655	.6293	.6345
1⅓	.3850	.2780	.2728	.4720	.4772
2	.2600	.1853	.1801	.3147	.3199
3	.1767	.1235	.1183	.2098	.2150
4	.1350	.0927	.0875	.1573	.1625
5	.1100	.0741	.0689	.1259	.1311
6	.0933	.0618	.0566	.1049	.1101
7	.0814	.0529	.0478	.0899	.0951
8	.0725	.0463	.0411	.0787	.0839
9	.0655	.0413	.0361	.0699	.0751
10	.0600	.0371	.0319	.0629	.0681

Taps and Dies made with above thread are made only to order. Prices quoted on application.

INTERNATIONAL STANDARD THREAD.

At the "Congress International pour L'Unification des Filetages," held in Zurich, October 24, 1898, the following resolutions were adopted:

The Congress has undertaken the task of unifying the threads of machine screws. It recommends to all those who wish to adopt the metric system of threads to make use of the proposed system. This system is the one which has been established by the "Society for the Encouragement of National industries," with the following modification adopted by this Congress.

1. The clearance at the bottom of thread shall not exceed $\frac{1}{16}$ part of the height of the original triangle. The shape of the bottom of the thread resulting from said clearance is left to the judgment of the manufacturers. However, the Congress recommends rounded profile for said bottom.

3. The table for Standard Diameters accepted is the one which has been proposed by the Swiss Committee of Action. (This table is given below.) It is to be noticed especially that 1.25 mm. pitch is adopted for 8 mm. diameter, and 1.75 mm. pitch for 12 mm. diameter. The pitches of sizes between standard diameters indicated in the table are to be the same as for the next smaller standard diameter.

The rules adopted unanimously by the members of the Congress will be formulated by the Swiss Union of Manufacturers, the German Association of Engineers, and the "Society for the Encouragement of National Industries." The system will be known under the name of International System (Systeme Internationale, S. I.)

TABLES OF DIAMETERS WITH CORRESPONDING PITCHES.

DIMENSIONS IN MILLIMETERS.

Diam.	Pitch	Diam.	Pitch	Diam.	Pitch	Diam.	Pitch
6	1.00	18	2.50	39	4.00	68	6.00
7	1.00	20	2.50	42	4.50	72	6.50
8	1.25	22	2.50	45	4.50	76	6.50
9	1 25	24	3.00	48	5.00	80	7.00
10	1.50	27	3.00	52	5.00	88	7.50
11	1.50	30	3.50	56	5.50	96	8.00
12	1.75	33	3.50	60	5.50	116	9.00
14	2.00	36	4.00	64	6.00	136	10.00
16	2.00						

The "International Standard" is the same, with modifications noted, as that now in general use in France.

METRIC STANDARD SCREW THREADS.

Diameter of the Screw m/m	Pitch m/m	Diameter at Root of Thread m/m	Width of Flat m/m
3	0.5	2.35	.06
4	0.75	3.03	.09
5	0.75	4.03	.09
6	1.0	4.70	.13
7	1.0	5.70	.13
8	1.0	6.70	.13
8	1.25	6.38	.16
9	1.0	7.70	.13
9	1.25	7.38	.16
10	1.5	8.05	.19
11	1.5	9.05	.19
12	1.5	10.05	.19
12	1.75	9.73	.22
14	2.0	11.40	.25
16	2.0	13.40	.25
18	2.5	14.75	.31
20	2.5	16.75	.31
22	2.5	18.75	.31
22	3.0	18.10	.38
24	3.0	20.10	.38
26	3.0	22.10	.38
27	3.0	23.10	.38
28	3.0	24.10	.38
30	3.5	25.45	.44
32	3.5	27.45	.44
33	3.5	28.45	.44
34	3.5	29.45	.44
36	4.0	30.80	.5
38	4.0	32.80	.5
39	4.0	33.80	.5
40	4.0	34.80	.5
42	4.5	36.15	.56
44	4.5	38.15	.56
45	4.5	39.15	.56
46	4.5	40.15	.56
48	5.0	41.51	.63
50	5.0	43.51	.63
52	5.0	45.51	.63
56	5.5	48.86	.69
60	5.5	52.86	.69
64	6.0	56.21	.75
68	6.0	60.21	.75
72	6.5	63.56	.81
76	6.5	67.56	.81
80	7.0	70.91	.88

THE METRIC SYSTEM.

The Metric System is based on the Meter which was designed to be one ten-millionth (1-10,000,000) part of the earth's meridian, passing through Dunkirk and Formentera. Later investigations, however, have shown that the Meter exceeds one ten-millionth part by almost one part in 6400. The value of the Meter as authorized by the United States Government, is 39.37 inches. The Metric system was legalized by the United States Government in 1866.

The three principal units are the Meter, the unit of length, the liter, the unit of capacity, and the Gram, the unit of weight. Multiples of these are obtained by prefixing the Greek words: deka (10), hekto (100), and kilo (1000), Divisions are obtained by prefixing the Latin words: deci (1-10), centi (1-100), and milli (1-1000). Abbreviations of the multiples begin with a capital letter, and of the divisions with a small letter, as in the following tables:

MEASURES OF LENGTH.

10 millimeters (mm.)	=1 centimeter	cm.
10 centimeters	=1 decimeter	dm.
10 decimeters	=1 meter	m.
10 meters	=1 dekameter	Dm.
10 dekameters	=1 hektometer	Hm.
10 hektometers	=1 kilometer	Km.

MEASURES OF SURFACE (NOT LAND.)

100 square millimeters (mm. ^{2})	=1 square centimeter	cm.^{2}
100 square centimeters	=1 square decimeter	dm.^{2}
100 square decimeters	=1 square meter	m.^{2}

MEASURES OF VOLUME.

1000 cubic millimeters (mm.^{3})	=1 cubic centimeter	cm.^{3}
1000 cubic centimeters	=1 cubic decimeter	dm.^{3}
1000 cubic decimeters	=1 cubic meter	m.^{3}

MEASURES OF CAPACITY.

10 mililiters (ml.)	=1 centiliter	cl.
10 centiliters	=1 deciliter	dl.
10 deciliters	=1 liter	l.
10 liters	=1 dekaliter	Dl.
10 dekaliters	=1 hektoliter	Hl.
10 hektoliters	=1 kiloliter	Kl.

NOTE.—The liter is equal to the volume occupied by 1 cubic decimeter.

MEASURES OF WEIGHT.

10 milligrams (mg.)	=1 centigram	cg.
10 centigrams	=1 decigram	dg.
10 decigrams	=1 gram	g.
10 grams	=1 dekagram	dg.
10 dekagrams	=1 hekatogram	Hg.
10 hektograms	=1 kilogram	Kg
1000 kilograms	=1 ton	T.

NOTE.—The gram is the weight of one cubic centimeter of pure distilled water at a temperature of 39.2 °F.; the kilogram is the weight of 1 liter of water; the ton is the weight of 1 cubic meter of water.

Little Giant.

METRIC AND ENGLISH OR AMERICAN (U. S.) EQUIVALENT MEASURES.

MEASURES OF LENGTH.

1 meter = 39.37 inches. 3.28083 feet. 1.0936 yards.
1 centimeter = .3937 inch
1 millimeter = .03937 inch, or 1-25 inch nearly
1 kilometer = 0.62137 mile.

1 foot = .3048 meter.
1 inch = 2.54 centimeters. 25.4 millimeters.

MEASURES OF SURFACE.

1 square meter = 10.764 square feet. 1.196 square yards.
1 square centimeter = .155 square inch.
1 square millimeter = .00155 square inch.

1 square yard = .836 square meter.
1 square foot = .0929 square meter.
1 square inch = 6.452 square centimeters. 645.2 square millimeters.

MEASURES OF VOLUME AND CAPACITY.

1 cubic meter = 35.314 cubic feet. 1.308 cubic yards. 264.2 gallons (231 cubic inch.)
1 cubic decimeter = 61.023 cubic inch .0353 cubic feet
1 cubic centimeter = .061 cubic inch.
1 liter = 1 cubic decimeter. 61.023 cubic inches .0353 cubic foot. 1.0567 quarts (U. S.) .2642 gallons (U. S.) 2.202 lbs. of water at 62 ° F.

1 cubic yard = .7645 cubic meter .02832 cubic meters
1 cubic foot = 28.317 cubic decimeters 28.317 liters.
1 cubic inch = 16.387 cubic centimeters.
1 gallon (British) = 4.543 liters.
1 gallon (U. S.) = 3.785 liters

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MEASURES OF WEIGHT.

1 gram = 15.432 grains.
1 kilogram = 2.2046 pounds.
1 metric ton = .9842 ton of 2240 lbs. 19.68 cwts. 2204.6 lbs.

1 grain. = .0648 gram.
1 ounce avoirdupois = 28.35 grams.
1 pound = .4536 kilograms.
1 ton of 2240 lbs = 1.016 metric tons. 1016 kilograms.

MISCELLANEOUS.

1 kilogram per meter = .6720 pounds per foot.
1 gram per square millimeter = 1.422 pounds per square inch.
1 kilogram per square meter = 0.2084 per square foot.
1 kilogram per cubic meter = .0624 per cubic foot.
1 degree centigrade = 1.8 degrees Fahrenheit.
1 pound per foot = 1.488 kilograms per meter.
1 pound per square foot = 4.882 kilograms per square meter.
1 pound per Cubic foot = 16.02 kilograms per cubic meter.
1 degree Fahrenheit = .5556 degrees centigrade.
1 Calorie (French Thermal Unit) — 3.968 B. T. U. (British Thermal Unit.)
1 Horse Power = 33,000 foot pounds per minute. 746 Watts.
1 Watt (Unit of Electrical Power) .00134 Horse Power. 44.24 foot pounds per minute.
1 Kilowatt = 1000 Watts. 1.34 Horse Power. 44240 foot pounds per minute.

Little Giant

ENGLISH INCHES INTO MILLIMETERS.

In.	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16
0	0.0	1.6	3.2	4.8	6.4	7.9	9.5	11.1	12.7	14.3	15.9	17.5	19.1	20.6	22.2	23.8
1	25.4	27.0	28.6	30.2	31.7	33.3	34.9	36.5	38.1	39.7	41.3	42.9	44.4	46.0	47.6	49.2
2	50.8	52.4	54.0	55.6	57.1	58.7	60.3	61.9	63.5	65.1	66.7	68.3	69.8	71.4	73.0	74.6
3	76.2	77.8	79.4	81.0	82.5	84.1	85.7	87.3	88.9	90.5	92.1	93.7	95.2	96.8	98.4	100.0
4	101.6	103.2	104.8	106.4	108.0	109.5	111.1	112.7	114.3	115.9	117.5	119.1	120.7	122.2	123.8	125.4
5	127.0	128.6	130.2	131.8	133.4	134.9	136.5	138.1	139.7	141.3	142.9	144.5	146.1	147.6	149.2	150.8
6	152.4	154.0	155.6	157.2	158.8	160.3	161.9	163.5	165.1	166.7	168.3	169.9	171.5	173.0	174.6	176.2
7	177.8	179.4	181.0	182.6	184.2	185.7	187.3	188.9	190.5	192.1	193.7	195.3	196.9	198.4	200.0	201.6
8	203.2	204.8	206.4	208.0	209.6	211.1	212.7	214.3	215.9	217.5	219.1	220.7	222.3	223.8	225.4	227.0
9	228.6	230.2	231.8	233.4	235.0	236.5	238.1	239.7	241.3	242.9	244.5	246.1	247.7	249.2	250.8	252.4
10	254.0	255.6	257.2	258.8	260.4	261.9	263.5	265.1	266.7	268.3	269.9	271.5	273.1	274.6	276.2	277.8
11	279.4	281.0	282.6	284.2	285.7	287.3	288.9	290.5	292.1	293.7	295.3	296.9	298.4	300.0	301.6	303.2
12	304.8	306.4	308.0	309.6	311.1	312.7	314.3	315.9	317.5	319.1	320.7	322.3	323.8	325.4	327.0	328.5
13	330.2	331.8	333.4	335.0	336.5	338.1	339.7	341.3	342.9	344.5	346.1	347.7	349.2	350.8	352.4	354.0
14	355.6	357.2	358.8	360.4	361.9	363.5	365.1	366.7	368.3	369.9	371.5	373.1	374.6	376.2	377.8	379.4
15	381.0	382.6	384.2	385.8	387.3	388.9	390.5	392.1	393.7	395.3	396.9	398.5	400.0	401.6	403.2	404.8
16	406.4	408.0	409.6	411.2	412.7	414.3	415.9	417.5	419.1	420.7	422.3	423.9	425.4	427.0	428.6	430.2
17	431.8	433.4	435.0	436.6	438.1	439.7	441.3	442.9	444.5	446.1	447.7	449.3	450.8	452.4	454.0	455.6
18	457.2	458.8	460.4	462.0	463.5	465.1	466.7	468.3	469.9	471.5	473.1	474.7	476.2	477.8	479.4	481.0
19	482.6	484.2	485.8	487.4	488.9	490.5	492.1	493.7	495.3	496.9	498.5	500.1	501.6	503.2	504.8	506.4
20	508.0	509.6	511.2	512.8	514.3	515.9	517.5	519.1	520.7	522.3	523.9	525.5	527.0	528.6	530.2	531.8
21	533.4	535.0	536.6	538.2	539.7	541.3	542.9	544.5	546.1	547.7	549.3	550.9	552.4	554.0	555.6	557.2
22	558.8	560.4	562.0	563.6	565.1	566.7	568.3	569.9	571.5	573.1	574.7	576.3	577.8	579.4	581.0	582.6
23	584.2	585.8	587.4	589.0	590.5	592.1	593.7	595.3	596.9	598.5	600.1	601.7	603.2	604.8	606.4	608.0

39.37 inches=1 m.=10 dm. =100 cm.=1000 mm. 24.00 inches=0.6096 m. 1 yard=0.9144 m. 1 mile=1609.3 m.

Little Giant.

TABLE OF DECIMAL EQUIVALENTS OF MILLIMETERS AND FRACTIONS OF MILLIMETERS.

$\frac{1}{100}$ m-m = .0003937 Inch.

m/m	Inches.	m/m	Inches.	m/m	Inches.
$\frac{1}{50}$	.00079	$\frac{26}{50}$	.02047	2	.07874
$\frac{2}{50}$	.00157	$\frac{27}{50}$	.02126	3	11811
$\frac{3}{50}$	.00236	$\frac{28}{50}$	.02205	4	.15748
$\frac{4}{50}$	00315	$\frac{29}{50}$	.02283	5	.19685
$\frac{5}{50}$	.00394	$\frac{30}{50}$	.02362	6	.23622
$\frac{6}{50}$	.00472	$\frac{31}{50}$	.02441	7	.27559
$\frac{7}{50}$	.00551	$\frac{32}{50}$	.02520	8	.31496
$\frac{8}{50}$	.00630	$\frac{33}{50}$	.02598	9	.35433
$\frac{9}{50}$	.00709	$\frac{34}{50}$	.02677	10	.39370
$\frac{10}{50}$	.00787	$\frac{35}{50}$	.02756	11	.43307
$\frac{11}{50}$	.00866	$\frac{36}{50}$	.02835	12	.47244
$\frac{12}{50}$	.00945	$\frac{37}{50}$	.02913	13	.51181
$\frac{13}{50}$	.01024	$\frac{38}{50}$	.02992	14	.55118
$\frac{14}{50}$	.01102	$\frac{39}{50}$	.03071	15	.59055
$\frac{15}{50}$	.01181	$\frac{40}{50}$	.03150	16	.62992
$\frac{16}{50}$	.01260	$\frac{41}{50}$	.03228	17	.66929
$\frac{17}{50}$	.01339	$\frac{42}{50}$	.03307	18	.70866
$\frac{18}{50}$	.01417	$\frac{43}{50}$	.03386	19	.74803
$\frac{19}{50}$	.01496	$\frac{44}{50}$	.03465	20	.78740
$\frac{20}{50}$	.01575	$\frac{45}{50}$	.03543	21	.82677
$\frac{21}{50}$	.01654	$\frac{46}{50}$	.03622	22	.86614
$\frac{22}{50}$	.01732	$\frac{47}{50}$	.03701	23	.90551
$\frac{23}{50}$	.01811	$\frac{48}{50}$	.03780	24	.94488
$\frac{24}{50}$	.01890	$\frac{49}{50}$	.03858	25	.98425
$\frac{25}{50}$	.01969	1	.03937	26	1.02362

10 m/m=1 centimeter = 0.3937 inches.

10 c/m=1 decimeter = 3.937 inches.

10 d/m=1 meter 39.37 = inches.

25.4 m/m=1 English inch.

Little Giant.

STANDARD DIMENSIONS OF WROUGHT IRON WELDED TUBES.

BRIGGS STANDARD.

DIAMETER OF TUBES			Thickness of Metal Inches	SCREWED ENDS	
Nominal Outside, Inches	Actual Outside, Inches	Actual Outside, Inches		Number of Threads Per Inch	Length of Perfect Thd. In.
1/8	0.270	0.405	0.068	27	0.19
1/4	0.364	0.540	0.088	18	0.29
3/8	0.494	0.675	0.091	18	0.30
1/2	0.623	0.840	0.109	14	0.39
3/4	0.824	1.050	0.113	14	0.40
1	1.048	1.315	0.134	11 1/2	0.51
1 1/4	1.380	1.660	0.140	11 1/2	0.54
1 1/2	1.610	1.900	0.145	11 1/2	0.55
2	2.067	2.375	0.154	11 1/2	0.58
2 1/2	2.468	2.875	0.204	8	0.89
3	3.067	3.500	0.217	8	0.95
3 1/2	3.548	4.000	0.226	8	1.00
4	4.026	4.500	0.237	8	1.05
4 1/2	4.508	5.000	0.246	8	1.10
5	5.045	5.563	0.259	8	1.16
6	6.065	6.625	0.280	8	1.26
7	7.023	7.625	0.301	8	1.36
8	7.982	8.625	0.322	8	1.46
*9	9.000	9.688	0.344	8	1.57
10	10.019	10.750	0.366	8	1.68

Taper of Conical Tube ends, 1 in 32 to axis of tube (3/4 inch per foot.)

*By the action of the manufacturers of Wrought Iron Pipe and boiler tube, at a meeting held in New York, May 9, 1889, a change in size of actual outside diameter of 9 inch pipe was adopted, making the latter 9.625 instead of 9.688 inches as given in the table of Briggs Standard pipe diameters.

CONSTANTS FOR FINDING DIAMETER AT BOTTOM OF THREAD.

Threads Per Inch	U. S. Standard Constant	"V" Thread Constant	Threads Per Inch	U. S. Standard Constant	"V" Thread Constant
64	.02029	.02706	16	.08118	.10825
60	.02165	.02889	14	.09278	.12357
56	.02319	.03092	13	.09992	.13323
50	.02595	.03464	12	.10825	.14433
48	.02706	.03608	11	.11809	.15745
44	.02952	.03936	10	.12990	.17320
40	.03247	.04330	9	.14433	.19244
36	.03608	.04811	8	.16237	.21650
32	.04059	.05412	7	.18555	.24742
30	.04330	.05773	6	.21650	.28866
28	.04639	.06185	5½	.23618	.31490
26	.04996	.06661	5	.25980	.34650
24	.05412	.07216	4½	.28866	.38488
22	.05904	.07872	4	.32475	.43300
20	.06495	.08660	3½	.37114	.49485
18	.07216	.09622	3	.43333	.57733

C=Constant for Number of Threads per inch.

D=Outside Diameter.

D^1=Diameter at Bottom of D^1=D—C.

EXAMPLE—Given outside diameter of U. S. S. screw thread 2 inches 4½ Threads per inch. Find diameter at bottom of thread. D=2 inches for 4½ threads U. S. S. constant. C=.2886; then diameter at bottom of thread, D^1=2—.2886=1.7114 inches.

Little Giant.

DIFFERENT STANDARDS FOR WIRE GAUGE IN USE IN THE UNITED STATES.

DIMENSIONS OF SIZES IN DECIMAL PARTS OF AN INCH.

Number of Wire Gauge	American or Brown & Sharpe	Birmingham or Stubs' Iron Wire	Washburn & Moen Mfg. Co., Worcester Mass.	Trenton Iron Co. Trenton N. J.	Stubs' Steel Wire	U. S. Standard for Plate	Number of Wire Gauge
000000	.....	.....	.....	.....	.....	.46875	000000
00000	.....	.....	.....	.45	.....	.4375	00000
0000	.46	.454	.3938	.4	.....	.40625	0000
000	.40964	.425	.3625	.36	.....	.375	000
00	.3648	.38	.3310	.33	.....	.34375	00
0	.32486	.34	.3065	.305	.....	.3125	0
1	.2893	.3	.2830	.285	.227	.28125	1
2	.25763	.284	.2625	.265	.219	.265625	2
3	.22942	.259	.2437	.245	.212	.25	3
4	.20431	.238	.2253	.225	.207	.234375	4
5	.18194	.22	.2070	.205	.204	.21875	5
6	.16202	.203	.1920	.19	.201	.203125	6
7	.14428	.18	.1770	.175	.199	.1875	7
8	.12849	.165	.1620	.16	.197	.171875	8
9	.11443	.148	.1483	.145	.194	15625	9
10	.10189	.134	.1350	.13	.191	.140625	10
11	.090742	.12	.1205	.1175	.188	125	11
12	.080808	.109	.1055	.105	.185	.109375	12
13	.071961	.095	.0915	.0925	.182	.09375	13
14	.064084	.083	.0800	.08	.180	.078125	14
15	.057068	.072	.0720	.07	.178	.0703125	15
16	.05082	.065	.0625	.061	.175	.0625	16
17	.045257	.058	.0540	.0525	.172	.05625	17
18	.040303	.049	.0475	.045	.168	.05	18
19	.03589	.042	.0410	.04	.164	.04375	19
20	.031961	.035	.0348	.035	.161	.0375	20
21	.028462	.032	.03175	.031	.157	.034375	21
22	.025347	.028	.0286	.028	.155	.03125	22
23	.022571	.025	.0258	.025	.153	.028125	23
24	.0201	.022	.0230	.0225	.151	.025	24
25	.0179	.02	.0204	.02	.148	.021875	25
26	.01594	.018	.0181	.018	.146	.01875	26
27	.014195	.016	.0173	.017	.143	.0171875	27
28	.012641	.014	.0162	.016	.139	.015625	28
29	.011257	.013	.0150	.015	.134	.0140625	29
30	.010025	.012	.0140	.014	.127	.0125	30
31	.008928	.01	.0132	.013	.120	.0109375	31
32	.00795	.009	.0128	.012	.115	.01015625	32
33	.00708	.008	.0118	.011	.112	.009375	33
34	.006304	.007	.0104	.01	.110	.00859375	34
35	.005614	.005	.0095	.0095	.108	.0078125	35
36	.005	.004	.0090	.009	.106	.00703125	36
37	.004453			.0085	.103	.006640625	37
38	.003965			.008	.101	.00625	38
39	.003531			.0075	.099		39
40	.003144			.007	.097		40

Little Giant.

MACHINE AND WOOD SCREW GAUGE.

Number of Screw Gauge	Size of Number in Decimals	Number of Screw Gauge	Size of Number in Decimals
000	.03152	25	.38684
00	.04468	26	.40000
0	.05784	27	.41316
1	.07100	28	.42632
2	.08416	29	.43948
3	.09732	30	.45264
4	.11048	31	.46580
5	.12364	32	.47896
6	.13680	33	.49212
7	.14996	34	.50528
8	.16312	35	.51844
9	.17628	36	.53160
10	.18944	37	.54476
11	.20260	38	.55792
12	.21576	39	.57108
13	.22892	40	.58424
14	.24208	41	.59740
15	.25524	42	.61056
16	.26840	43	.62372
17	.28156	44	.63688
18	.29472	45	.65004
19	.30788	46	.66320
20	.32104	47	.67636
21	.33420	48	.68952
22	.24736	49	.70268
23	.36052	50	.71584
24	.37368		

The difference between consecutive sizes is .01316 inch.

DRILL SIZES FOR REGULAR THREADS.

These sizes give an allowance above the bottom of thread on sizes $\frac{3}{16}$ to 2; varying respectively as follows: for "V" Threads, .010″ to 055″; for U. S. S. and Whitworth threads, 005″ to 027″.

These are found by adding to the size at bottom of thread, $\frac{1}{4}$ of the pitch for "V" threads, and $\frac{1}{8}$ of the pitch for U. S. S. and Whitworth, the pitch being equal to 1″ ÷ No. of threads per 1″.

In practice it is better to use a larger drill if the exact size called for cannot be had.

Size Screw	No. of Threads	Size of Drill			Size Screw	No. of Thread	Size of Drill		
		U. S. S.	"V"	W.			U. S. S.	"V"	W.
$\frac{1}{4}$	24	.201	.196	.202	$\frac{15}{16}$	9	.808	.790	.810
$\frac{1}{4}$	20	.191	.184	.192	1	8	.854	.832	.856
$\frac{5}{16}$	18	.248	.239	.249	$1\frac{1}{16}$	8	.917	.894	.919
$\frac{3}{8}$	16	.302	.293	.303	$1\frac{1}{8}$	7	.957	.932	.960
$\frac{7}{16}$	14	.354	.345	.355	$1\frac{1}{4}$	7	1·082	1.057	1.085
$\frac{1}{2}$	13	.409	.399	.410	$1\frac{3}{8}$	6	1.179	1.144	1.182
$\frac{1}{2}$	12	.402	.391	.403	$1\frac{1}{2}$	6	1.304	1.269	1.307
$\frac{9}{16}$	12	.465	.453	.466	$1\frac{5}{8}$	$5\frac{1}{2}$	1.412	1.372	1.416
$\frac{5}{8}$	11	.518	.506	.520	$1\frac{5}{8}$	5	1.390	1.347	1.394
$\frac{11}{16}$	11	.581	.568	.583	$1\frac{3}{4}$	5	1.515	1.472	1.519
$\frac{3}{4}$	10	.632	.618	.634	$1\frac{7}{8}$	5	1.640	1.597	1.644
$\frac{13}{16}$	10	.695	.680	.697	$1\frac{7}{8}$	$4\frac{1}{2}$	1.614	1.566	1.619
$\frac{7}{8}$	9	.745	.728	.747	2″	$4\frac{1}{2}$	1.739	1.691	1.744

DRILL SIZES FOR MACHINE SCREW TAPS.

Size of Tap.	Number of Drill.	Size of Tap.	Number of Drill.	Size of Tap.	Number of Drill.
1^{56}	53	7^{32}	$\frac{1}{8}$	14^{20}	10
1^{60}	53	7^{30}	31	14^{18}	$\frac{3}{16}$
1^{64}	53	7^{40}	30	14^{24}	$\frac{13}{64}$
1^{72}	52	8^{32}	29	15^{20}	4
$1\frac{1}{2}^{56}$	52	8^{30}	29	15^{18}	7
2^{56}	49	8^{36}	28	15^{24}	$\frac{7}{32}$
2^{48}	49	8^{40}	27	16^{18}	3
2^{64}	50	9^{30}	26	16^{16}	4
3^{48}	46	9^{28}	27	16^{20}	2
3^{40}	47	9^{32}	25	18^{18}	C
3^{56}	44	10^{24}	24	18^{16}	A
4^{36}	43	10^{28}	22	18^{20}	D
4^{32}	44	10^{30}	20	20^{16}	F
4^{40}	43	10^{32}	19	20^{18}	H
4^{42}	42	10^{36}	18	22^{16}	L
4^{48}	41	11^{24}	19	22^{18}	M
5^{36}	38	11^{28}	18	24^{16}	$\frac{5}{16}$
5^{32}	40	11^{30}	17	24^{14}	N
5^{40}	37	12^{24}	16	24^{18}	O
6^{32}	33	12^{20}	19	26^{16}	R
6^{30}	35	12^{32}	$\frac{3}{16}$	26^{14}	Q
6^{36}	32	13^{22}	$\frac{3}{16}$	28^{14}	T
6^{38}	31	13^{20}	15	28^{16}	U
6^{40}	31	13^{24}	11	30^{14}	W
6^{48}	$\frac{1}{8}$	13^{32}	$\frac{13}{64}$	30^{16}	$\frac{25}{64}$

All "Little Giant" Machine Screw Taps have the size drill to be used stamped on shank.

TAP DRILLS.

FOR PIPE TAPS.

The sizes of Twist Drills to be used in boring holes, to be reamed with Pipe Reamer, and Threaded with Pipe Tap, are as follows :

Size Tap	BRIGGS		WHITWORTH		Size	BRIGGS		WHITWORTH	
	Thread	Drill	Thread	Drill		Thread	Drill	Thread	Drill
1/8	27	21/64	28	5/16	3	8	3 3/16	11	3 9/32
1/4	18	27/64	19	27/64	3 1/4			11	3 1/2
3/8	18	9/16	19	9/16	3 1/2	8	3 11/16	11	3 3/4
1/2	14	11/16	14	11/16	3 3/4			11	4
5/8			14	25/32	4	8	4 3/16	11	4 1/4
3/4	14	29/32	14	29/32	4 1/2	8	4 11/16	11	4 3/4
7/8			14	1 1/16	5	8	5 1/4	11	5 1/4
1	11 1/2	1 1/8	11	1 1/8	5 1/2			11	5 3/4
1 1/4	11 1/2	1 15/32	11	1 15/32	6	8	6 5/16	11	6 1/4
1 1/2	11 1/2	1 23/32	11	1 23/32	7	8	7 5/16	10	7 7/32
1 3/4			11	1 15/16	8	8	8 5/16	10	8 7/32
2	11 1/2	2 3/16	11	2 5/32	9	8	9 5/16	10	9 7/32
2 1/4			11	2 13/32	10	8	10 5/16	10	10 3/16
2 1/2	8	2 9/16	11	2 25/32	11	8	11 21/32	8	11 1/8
2 3/4			11	3 1/32	12	8	12 21/32	8	12 1/8

WEIGHTS.

Of Square and Round Bars of Wrought Iron in Pounds Per Linear Foot.—KENT.

Iron weighing 480 pounds per cubic foot. For steel add 2 per cent.

Thickness or Diameter in Inches	Weight of Square Bar One Foot Long	Weight of Round Bar One Foot Long	Thickness or Diameter in Inches	Weight of Square Bar One Foot Long	Weight of Round Bar One Foot Long	Thickness or Diameter in Inches	Weight of Square Bar One Foot Long	Weight of Round Bar One Foot Fong
0			2 11/16	24.08	18.91	5 3/8	96.30	75.64
1/16	.013	.010	3/4	25.21	19.80	7/16	98.55	77.40
1/8	.052	.041	13/16	26.37	20.71	1/2	100.8	79.19
3/16	.117	.092	7/8	27.55	21.64	9/16	103.1	81.00
1/4	.208	.164	15/16	28.76	22.59	5/8	105.5	82.83
5/16	.326	.256	3	30.00	23.56	11/16	107.8	84.69
3/8	.469	.368	1/16	31.26	24.55	3/4	110.2	86.56
7/16	.638	.501	1/8	32.55	25.57	13/16	112.6	88.45
1/2	.833	.654	3/16	33.87	26.60	7/8	115.1	90.36
9/16	1.055	.828	1/4	35.21	27.65	15/16	117.5	92.29
5/8	1.302	1.023	5/16	36.58	28.73	6	120.0	94.25
11/16	1.576	1.237	3/8	37.97	29.82	1/8	125.1	98.22
3/4	1.875	1.473	7/16	39.39	30.94	1/4	130.2	102.3
13/16	2.201	1.728	1/2	40.83	32.07	3/8	135.5	106.4
7/8	2.552	2.004	9/16	42.30	33.23	1/2	140.8	110.6
15/16	2.930	2.301	5/8	43.80	34.40	5/8	146.3	114.9
1	3.333	2.618	11/16	45.33	35.60	3/4	151.9	119.3
1/16	3.763	2.955	3/4	46.88	36.82	7/8	157.6	123.7
1/8	4.219	3.313	13/16	48.45	38.05	7	163.5	128.3
3/16	4.701	3.692	7/8	50.05	39.31	1/8	169.2	132.9
1/4	5.208	4.091	15/16	51.68	40.59	1/4	175.2	137.6
5/16	5.742	4.510	4	53.33	41.89	3/8	181.3	142.4
3/8	6.302	4.950	1/16	55.01	43.21	1/2	187.5	147.3
7/16	6.888	5.410	1/8	56.72	44.55	5/8	193.8	152.2
1/2	7.500	5.890	3/16	58.45	45.91	3/4	200.2	157.2
9/16	8.138	6.392	1/4	60.21	47.29	7/8	206.7	162.4
5/8	8.802	6.913	5/16	61.99	48.69	8	213.3	167.6
11/16	9.492	7.455	3/8	63.80	50.11	1/4	226.9	178.2
3/4	10.21	8.018	7/16	65.64	51.55	1/2	240.8	189.2
13/16	10.95	8.601	1/2	67.50	53.01	3/4	255.2	200.4
7/8	11.72	9.204	9/16	69.39	54.50	9	270.0	212.1
15/16	12.51	9.828	5/8	71.30	56.00	1/4	285.2	224.0
2	13.33	10.47	11/16	73.24	57.52	1/2	300.8	236.3
1/16	14.18	11.14	3/4	75.21	59.07	3/4	316.9	248.9
1/8	15.05	11.82	13/16	77.20	60.63	10	333.3	261.8
3/16	15.95	12.53	7/8	79.22	62.22	1/4	350.2	275.1
1/4	16.88	13.25	15/16	81.26	63.82	1/2	367.5	288.6
5/16	17.83	14.00	5	83.33	65.45	3/4	385.2	302.5
3/8	18.80	14.77	1/16	85.43	67.10	11	403.3	316.8
7/16	19.80	15.55	1/8	87.55	68.76	1/4	421.9	331.3
1/2	20.83	16.36	3/16	89.70	70.45	1/2	440.8	346.2
9/16	21.89	17.19	1/4	91.88	72.16	3/4	460.2	361.4
5/8	22.97	18.04	5/16	94.08	73.89	12	480.0	377.0

To compute the weight of sheet steel: Divide the thickness, expressed in thousandths, by 25; the result is the weight, in pounds, per square foot.

TABLE OF DECIMAL EQUIVALENTS.

	1-64	.0156		33-64	5156
	1-32	.0313		17-32	.5313
	3-64	.0469		35-64	.5469
1-16		.0625	9-16		.5625
	5-64	.0781		37-64	.5781
	3-32	.0938		19-32	.5938
	7-64	.1094		39-64	.6094
1-8		.1250	5-8		.6250
	9-64	.1406		41-64	.6406
	5-32	.1563		21-32	.6563
	11-64	.1719		43-64	.6719
3-16		.1875	11-16		.6875
	13-64	.2031		45-64	.7031
	7-32	.2188		23-32	.7188
	15-64	.2344		47-64	.7344
1-4		.2500	3-4		.7500
	17-64	.2656		49-64	.7656
	9-32	.2813		25-32	.7813
	19-64	.2969		51-64	.7969
5-16		3125	13-16		.8125
	21-64	.3281		53-64	.8281
	11-32	.3438		27-32	.8438
	23-64	.3594		55-64	.8594
3-8		.3750	7-8		.8750
	25-64	.3906		57-64	.8906
	13-32	.4063		29-32	.9063
	27-64	.4219		59-64	.9219
7-16		.4375	15-16		.9375
	29-64	.4531		61-64	.9531
	15-32	.4688		31-32	.9688
	31-64	.4844		63-64	.9844
1-2		.5000	1 in.		.1000

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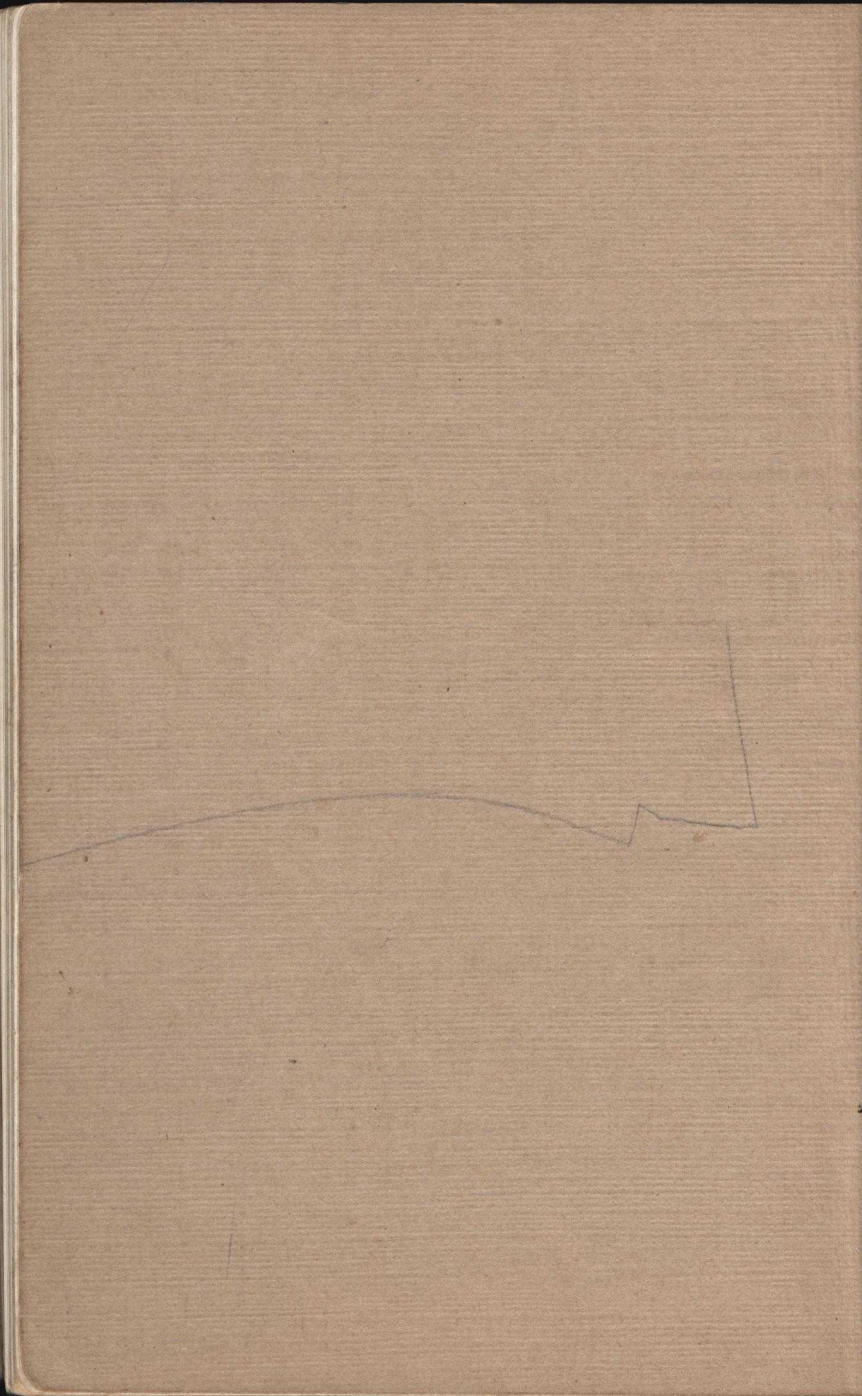

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